


**An exploration of the Sandtray Play Approach for narrative skills  
development in first language Afrikaans-speaking Grade 3  
learners with specific learning disability**

**Louise Saaiman**



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Supervisor: Dr Frenette Southwood

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## **Declaration**

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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## **Abstract**

Children with specific learning disability (SLD) struggle with reading, spelling and/or writing, and tend to have poor narrative skills (Fey, Catts, Proctor-Williams, Tomblin & Zhang, 2004; Scanlon, 2013). Although learners with SLD mostly use grammatical sentences after discharge from conventional speech-language therapy, they often still struggle with creating narratives and find comprehension tasks challenging. For this study, I chose an action research design (McNiff & Whitehead, 2013). I used a lesser known therapy approach with some of these learners, in an attempt to ascertain whether kinetic methods of teaching language can improve their narrative skills. The research question posed was: What changes in narrative skills (if any), measured in terms of micro and macro structure, are brought about by the Sandtray Play Approach (STPA) in first language (L1) Afrikaans-speaking Grade 3 learners with SLDs?

I used the STPA with four L1 Afrikaans-speaking Grade 3 boys with SLD over a course of six weeks (on average two therapy sessions per week). During each session, they each choose a variety of miniature objects with which they individually built a so-called “Sandworld” in their own sandtray. After each Sandworld was built, the boys took turns telling their story and listening to those of the other group member. After each narration, each listener made one positive comment and asked one question about the story. During the intervention period, I regularly presented mini-sessions teaching the participants how to create, improve and expand their narratives.

The Language in Multilingual Society: Multilingual Assessment of Narratives (LITMUS: MAIN-Afrikaans) (Gagarina, Klop, Kunnari, Tantele, Valimaa, Baluciuniene, Bohnacker, & Walters, 2012) was used to analyse pre- and post-intervention narratives in terms of story structure components; (in)completeness of episodes; mean length of utterance (in words); and use of subordinating and co-ordinating conjunctions, conjunctive adverbs and internal state terms. The pre- and post-intervention results of the four boys in the experimental group were compared to those of four boys who did not receive any STPA intervention and who formed the control group. All eight participants had been clinically diagnosed as presenting with an SLD.

Comparisons of the LITMUS: MAIN-Afrikaans scores indicated inter-group differences: Post-intervention, the experimental group used a higher number of story structure components, internal state terms, words, and utterances (those linguistic aspects introduced and practised during STPA intervention) than the control group. The experimental group's Sandtray narratives also increased in multiple areas of structural complexity – e.g., in the use of conjunctive adverbs; subordinating and co-ordinating conjunctions; and embedding.

These results have implications for speech-language therapy practice, showing that the STPA is potentially a valuable resource for teaching narrative skills to learners with SLD, and that positive changes can be observed in as little as six weeks. The STPA has been used in Europe with learners with hearing or learning impairment and with mainstream learners. In the South African context, it appears only to have been used to teach oral language use to deaf learners; and no South African studies on the use of the STPA for narrative skill development could be traced. This study was the first of its kind and indicated that using the STPA can assist Speech-Language Therapists in developing narrative skills of children with atypical language development.

## Opsomming

Kinders met spesifieke leergestremdheid (SLG) sukkel met lees, spelling en/of skryf, en neig om swak narratiefvaardighede te hê (Fey, Catts, Proctor-Williams, Tomblin & Zhang, 2004; Scanlon, 2013). Alhoewel leerders met SLG meestal grammatikale sinne gebruik ná ontslag uit konvensionele spraak-taal terapie, sukkel hulle steeds gereeld met narratiefproduksie en begripstake. Vir hierdie studie het ek gekies om 'n aksienavorsingsmetode (McNiff & Whitehead, 2013) te gebruik. Ek het 'n minder bekende terapiebenadering met sommige van hierdie leerders gevolg, in 'n poging om vas te stel of kinetiese metodes van taalonderrig hulle narratiefvaardighede kan verbeter. Die navorsingsvraag was: Watter veranderinge in narratiefvaardighede (indien enige), gemeet in terme van makro- en mikrostruktuur, word teweeg gebring deur die Sandbak-Speelbenadering (SBSB) in eerstetaal- (T1) Afrikaanssprekende Graad 3-leerders met SLG?

Ek het die SBSB met vier T1 Afrikaanssprekende Graad 3-seuns met SLG oor ses weke gebruik (gemiddeld twee terapiessessies per week). Tydens hierdie sessies het elkeen 'n verskeidenheid miniatuur voorwerpe gekies waarmee elkeen individueel 'n sogenaamde "Sandwêreld" in hulle eie sandbakkie gebou het. Nadat elke Sandwêreld gebou is, het die seuns beurt geneem om hulle storie te vertel en na die stories van die ander groeplede te luister. Nadat elke storie vertel is, het elke luisteraar een positiewe punt van kommentaar oor die storie gelewer en een vraag oor die storie gevra. Gedurende die intervensietydperk het ek gereeld mini-sessies aangebied om die deelnemers te leer hoe om narratiewe te skep, te verbeter en uit te brei.

Die *Language in Multilingual Society: Multilingual Assessment of Narratives (LITMUS: MAIN-Afrikaans)* (Gagarina, Klop, Kunnari, Tantele, Valimaa, Baluciuniene, Bohnacker, & Walters, 2012) is gebruik om voor- en ná-intervensie-narratiewe te ontleed in terme van storiestruktuurkomponente; (on)volledigheid van episodes; gemiddelde lengte van uiting (in woorde); en die gebruik van onderskikkende en neweskikkende voegwoorde, verbindingsbywoorde en interne toestand-terme. Ek het hierdie tellings vergelyk met dié behaal deur 'n kontrolegroep (vier manlike klasmaats van die eksperimentele groep). Ek het ook 'n seleksie van drie verteenwoordigende sandbaknarratiewe per eksperimentele

groepdeelnemer in terme van hierdie metings geassesseer Al ag deelnemers is klinies gediagnoseer met SLG.

Vergelykings van die *LITMUS: MAIN-Afrikaans*-tellings het inter-groepsverskille aangetoon: Die eksperimentele groep het ná intervensie 'n groter aantal storiestruktuurkomponente, interne toestand-terme, woorde en uitinge (d.i. daardie linguistieke aspekte wat bekendgestel en geoefen is tydens SBSB-intervensie) gebruik as die kontrolegroep. Die eksperimentele groep se sandbakknarratiewe het ook toegeneem in terme van veelvuldige areas van strukturele kompleksiteit – byvoorbeeld in die gebruik van verbindingsbywoorde, onderskikkende en neweskikkende voegwoorde, en inbedding.

Hierdie resultate het implikasies vir spraak-taalterapiepraktyk: Dit toon aan dat die SBSB potensieel 'n waardevolle hulpbron is vir die leer van narratiefvaardighede aan leerders met SLG, en dat positiewe veranderinge in so min as ses weke waarneembaar is. Die SBSB word in Europa met leerders met gehoor- of leergestremdheid gebruik asook met hoofstroomleerders. In die Suid-Afrikaanse konteks is dit skynbaar nog slegs gebruik om gehoorgestremdes te leer praat; geen Suid-Afrikaanse studies oor die gebruik van die SBSB vir narratiefvaardigheidsontwikkeling kon gevind word nie. Hierdie studie was die eerste van sy soort en toon aan dat die gebruik van die SBSB Spraak-Taalterapeute kan help om narratiefvaardighede te ontwikkel in kinders met atipiese taalontwikkeling.

## **Dedication**

This thesis is dedicated to all the learners with specific learning disability who struggle to create narratives.

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## Chapter 1: Introduction

### 1.1. Background to the study

I am employed as a Speech-Language Therapist (SLT) at a specialised school for learners with specific learning disabilities (SLDs). Recently, during a visit to a school specialised for learners with hearing impairments, my headmaster observed teachers teaching their learners how to speak using what he could best describe as a “kinetic approach”. He was interested in ascertaining whether this approach would benefit the learners at his school and asked me, as a representative of the speech-language therapy department at his school, to work with the teachers at our school to pilot the kinetic approach.<sup>1</sup> I started the piloting process by performing an online search for “kinetic therapy” and discovered a book called “Sandtray Play and Storymaking” by Canadian educationalist Sheila Dorothy Smith (2012). Smith’s (2012) kinetic approach – generally known as the “Sandtray Play Approach” (STPA) – has been used in Europe with learners with hearing impairment or deafness and/or learning disability as well as with mainstream learners to improve narrative production and comprehension skills. In the South African context, however, it seems that the approach has only been used to teach learners with hearing impairment to speak. I decided to investigate the usefulness of kinetic methods of teaching – specifically Smith’s (2012) STPA – to target the development of narrative production and comprehension skills, for three reasons:

- (i) No published research could be traced on the use of this approach for narrative skill development within the South African context.
- (ii) Children with SLDs often demonstrate poor narrative skills (see, amongst others, Merrit & Liles, 1987; Manhardt & Rescorla, 2002).

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<sup>1</sup> The headmaster’s vision of offering kinetic therapy to the learners with learning disabilities reminded me of an anecdotal incident with one of my patients in a neurological-rehabilitation hospital. This patient had suffered a stroke and struggled to communicate verbally. He appeared aloof and did not initiate verbal communication or respond to two-dimensional tasks. He also appeared not to understand basic instructions. His Occupational Therapist gave him wire and a pair of pliers and showed him how to bend shapes, in an attempt to improve his fine motor skills, a task which he appeared to enjoy. After a month of bending shapes in silence, he began to utter words spontaneously and, with time, he began to produce verbal narratives. He appeared to understand commands with increasing ease and, by the manner in which he started communicating, the therapists judged that he had begun to take an interest in life again. This memory encouraged me to use kinetic stimulation as a means to stimulate “lost or broken language” in children.

- (iii) The teachers at the school at which I am employed have brought to my attention that, despite being able to speak in full, grammatical sentences, their learners struggle with creating narratives and find comprehension tasks challenging.

This study thus comprises the first investigation of the usefulness of the STPA with South African learners with SLDs, and the first with such Afrikaans-speaking learners. The findings of this study could therefore inform therapeutic guidelines regarding the STPA for narrative and comprehension skills of learners who are learning disabled.

## **1.2. Research question**

The study attempts to answer the following research question: What changes in narrative skills (if any), measured in terms of micro and macro structure, are brought about by the STPA in first language (L1) Afrikaans-speaking Grade 3 learners with specific learning disabilities (SLDs)?

## **1.3. Research methodology/process**

In order to answer the research question, I performed what can be best described as a form of action research (McNiff & Whitehead, 2013) during which narrative skills were targeted in four Afrikaans-speaking Grade 3 boys with SLD over a 6-week period. The STPA (Smith, 2012) was used during intervention. This entailed that the boys build so-called “Sandworlds” with miniature objects in a sandtray and then narrate a story based on their Sandworld. The boys attended an average of two sessions per week, and these sessions took the form of (i) mini sessions (to train a task requirement, for example, listening skills); (ii) occasionally one 45-minute small-group therapy session per week (two boys in a group at a time); and (iii) most often, two 45-minute combined group sessions (all four boys in one group). Narratives produced by participants during each STPA intervention session were analysed and served as the basis for decisions regarding the content of the next intervention session. Story structure, structural complexity and the use of internal state terms were assessed pre- and post-intervention to ascertain what gains (if any) in terms of macro structure of narratives were brought about by the STPA. In terms of micro structure, mean length of utterance in words (MLUw) and the use of conjunctions and embedding were assessed. The pre- and post-

intervention results of the four boys in the experimental group were compared to those of four boys who did not receive any STPA intervention and who formed the control group.

Three representative narrative samples were also selected from each of the four experimental group participants. These narratives came from the baseline, middle and end of the STPA intervention sessions. Narrative examples were then quantitatively and qualitatively analysed in terms of MLUw and the use of conjunctions, embedding and internal state terms. The pre- and post-test results and the analysis of the three narratives per experimental group participant were used to answer the research question.

## **1.4. Thesis outline**

Following this introduction, Chapter 2 provides an overview of narrative skill development in typically developing learners and learners with SLDs as well as the assessment thereof. This chapter provides a definition of an oral narrative; and discusses the domains of narrative ability. The importance of well-developed narrative skills to school-going learners and what to expect from narratives produced by typically developing learners and learners with SLD are also discussed. I then examine what narrative assessment protocols are used by Speech-Language Therapists (SLTs) internationally and in South Africa and what treatment measures are used by SLTs to teach oral narrative skills internationally and nationally.

Chapter 3 gives a comprehensive overview of the STPA (Smith, 2012) and its application to special populations. In this chapter, I discuss the advantages of using a play-centered approach with children and the potential of kinetics/movement to facilitate language development. I then turn to the STPA (Smith, 2012) specifically, discussing the history and development of the approach; what it entails; and its use with different clinical populations, including its use in speech-language therapy. I end off the chapter by considering the criticisms levelled against Sandtray approaches.

Chapter 4 presents the methodology chosen for this study. This chapter introduces the rationale for how participants were selected; discusses data collection procedures and instruments that were used during the study; and provides an in-depth explanation of how I

planned, conducted, recorded, and analysed pre- and post-intervention assessments and also how I conducted the STPA sessions.

Chapter 5 presents the results of the study and the discussion thereof. This chapter includes tables and associated discussions of the experimental and control group participants' pre- and post-intervention scores, as well as the results of the analysis of the three narratives from each experimental group participant.

Finally, Chapter 6 provides a concluding summary and explores how the STPA intervention influenced narrative skills. The chapter also provides implications for further research using the STPA in the area of narrative development in speech-language therapy.

## 1.5. Definition of key terms

Throughout this dissertation, the key terms listed below will be used frequently.

**Specific Learning Disability (SLD):** According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (American Psychiatric Association, 2013) and Scanlon (2013), a learner is diagnosed as having an SLD if they have at least a two-year backlog in specific academic learning areas such as reading, spelling, mathematics and writing.

**Sandplay Therapy Approach:** This is the traditional psychological approach of instructing patients to choose items and create stories in the sand. The choice of items and the positioning of items within the stories are then interpreted subjectively by the Psychologist to diagnose the patient's psychological pathology (Mitchell & Friedman, 1994).

**Sandtray Approach:** The post-modern psychological view of using oral narratives that have been created from stories told in a sandtray, to encourage patients to find solutions to their own psychological disorders (Bradway, 2006; Gallerani & Dybicz, 2011) is known as the "Sandtray Approach".

**Sandtray Play Approach (STPA):** This approach, originally devised by Smith (2012), comprises four phases: building; telling; listening; and writing. This approach requires



participants to choose items and create stories in the sand. The participant then (orally) tells the story. The listeners need to make positive comments and ask questions about the story.

**Sandworld:** This is the final “world”/ product that has been created by placing figurines within a sandtray (Mitchell & Friedman, 1994).

**Oral Narrative:** This is a type of discourse that comprises of “units of spoken text beyond the sentence level, and includes the ability to construct an original story and to recall a previously heard story” (Roth, Speece, Cooper & De La Paz, 1996, p. 258).

**Story Grammar Structure:** This typically provides the listener with spoken information pertaining to a sequence of events: a beginning, middle, and an end (Killgallon & Killgallon, 2008; Petersen & Spencer, 2012).

**Story Structure:** This includes story grammar components such as the setting; episodes that include a mental state as initiating event, goal, attempt, and outcome; and an ending to each episode that has a mental state as final reaction (Gagarina, Klop, Kunnari, Tantele, Valimaa, Baluciuniene, Bohnacker, & Walters, 2012).

**Structural Complexity of a Narrative:** This more specifically refers to the various sequences of story structure/story grammar components. These combinations are either incomplete or complete. Incomplete complexity refers to the various combinations of story structure/story grammar components such as action-outcome (A-O); goal (G); goal-attempt (G-A); and goal-outcome (G-O). Complete complexity refers to a full series of story structure/story grammar components, namely goal-attempt-outcome (G-A-O) (Gagarina et al., 2012).

**Mean Length of Utterance in words (MLUw):** This is a calculation performed by dividing the total number of words produced within a narrative by the number of utterances produced in the narrative (Oosthuizen & Southwood, 2009).

**Embedded clause:** An embedded clause is one clause that is included in another clause (Crystal, 1991). Embedding is also sometimes called “subordination” and is distinct from co-

ordination (Crystal, 1991) (see “co-ordinating conjunction” and “subordination conjunction” below).

**Relative Clause:** A relative clause is a type of embedded clause, a “post-modifying clause in a noun phrase” (Crystal, 1991, p. 296), i.e. a clause that provided more information a directly preceding noun, such as *The man who has two children is considering adoption* in which the relative clause *who has two children* is modifying the noun *man*.

**Co-ordinating Conjunction:** “A co-ordinating conjunction is a word such as ‘and’, ‘or’, ‘but’ which joins two or more words, groups, or clauses of equal [syntactic – LS] status, for example two main clauses” (Thomas, 2006, p. 310).

**Subordinating Conjunction:** “A subordinating conjunction is a word such as ‘although’, ‘because’, or ‘when’ which begins a subordinate clause” (Thomas, 2006, p. 1444). Subordinating conjunctions thus link “linguistic units so that they have different syntactic status, one being dependent upon the other, and usually a constituent of the other” (Crystal, 1991, p. 334).

**Conjunctive Adverb:** A conjunctive adverb is an adverb of which the main function is a connective one (see Crystal, 1991). These adverbs connect two independent clauses to show, amongst others, sequence.

**Internal State Term:** Internal state terms are terms that refer to perceptual (e.g., *feel*), physiological (e.g., *hungry*), emotional (e.g., *worried*) or consciousness (e.g., *awake*) states as well as to mental verbs (e.g., *decide*) and linguistic verbs (e.g., *say*) (Gagarina et al., 2012). Mental states are “interpreted as a marker for children’s understanding and awareness of intentionality and goal directed behaviour of protagonists” (Gagarina et al., 2012, p. 15) in a narrative.

## **Chapter 2: Narratives**

### **2.1. Introduction**

In this chapter, I start by providing some definitions of narratives as well as relevant information about local and international studies related to the various domains associated with narratives. I then present research-based information about the importance of oral narrative skills in young learners. This is followed by descriptions of the development of oral narrative skills in typically developing learners and in learners with specific learning disability (SLD). The next two sections of this chapter consider ways of assessing learners' oral narrative skills and speech-language therapy interventions for oral narrative skill development currently in use internationally and nationally. I conclude this chapter by explaining my research interest in relation to the literature that was presented in this chapter.

### **2.2. Definition of a narrative**

In order to understand what a narrative is one needs to consider its role within the context of discourse. Discourse can be defined as the “ability to use vocabulary and syntax skills in a cohesive manner to relate a series of events, it incorporates most of the language skills beyond sentence level and represents the primary language medium through which academic knowledge is conveyed and acquired” (Sleigh & Prinz, 1995, as cited in Crosson & Greers, 2000, p. 381). A narrative is a type of discourse that is comprised of “units of spoken text beyond the sentence level, and includes the ability to construct an original story and to recall a previously heard story” (Roth, Speece, Cooper & De La Paz, 1996, p. 258). Additionally, Southwood and Van Dulm (2012, p. 37) describe a narrative as “a story – it comes about when we use spoken or written language to relate to a sequence of real or fictional events.” For this study, I assess learners' oral (spoken) narrative skills and provide intervention for the same using a narrative-based Sandtray Play Approach (STPA) (Smith, 2012). This chapter thus focuses on oral narratives specifically, and on the telling (not retelling) thereof. (The STPA is discussed in the next chapter.)

## **2.3. The domains of narrative ability**

Researchers indicate three domains of narrative ability that learners need to achieve as they progress through school, namely story grammar structure; linguistic complexity, and the use of evaluative information (Killgallon & Killgallon, 2008; Manhardt & Rescorla, 2002). Researchers suggest that, together, these three domains account for narrative development which leads to emergent literacy and ultimately to overall academic success (Andreu, Sanz-Torrent, Guardia Olmos, & MacWhinney, 2011; Berman, 1988; Manhardt & Rescorla, 2002; Southwood & Van Dulm, 2012). Each three of these domains is discussed below.

### **2.3.1. Story grammar structure**

Story grammar structure typically provides the listener with spoken information pertaining to a sequence of events: a beginning, middle, and an end (Killgallon & Killgallon, 2008; Petersen & Spencer, 2012). The beginning includes information about the setting (or context) of the story, the characters that feature in the story, and an initiating event/problem, whereas the middle of the story includes a description/explanation of the characters' internal and overt responses to the event or problem. The end of the story includes the resolution to the event/problem and a summary/conclusion to all the happenings within the story (Killgallon & Killgallon, 2008; Petersen & Spencer, 2012; Thorndyke, 1977).

More specifically, Griffith, Ripich, and Dastoli (1987, p. 541) summarise story grammar units within narratives as consisting of story opening, setting, initiating event, internal response, plan, attempt, consequence, reaction, and episode. Table 1 provides a description of each of these story grammar units.

**Table 1: Summary of story grammar units [Source: Griffith et al. (1987, p. 541)]**

Story grammar unit	Description
Story opening	Opening, setting, episode structure as well as closing
Setting	Introduction of the main character(s), protagonist, and spatio-temporal context
Initiating event	The happening that causes the main character(s) to take action
Internal response	Indicates the thoughts, beliefs, and feelings of the characters in response to an initiating event and inspires the characters to respond
Plan	The action chosen by the protagonist
Attempt	The overt actions of the protagonist to achieve their goals
Consequence	Attainment or nonattainment of their goal or what happens as a result of their concerted efforts
Reaction	Any emotional or evaluative response by the protagonist to the chain of events that have occurred in the narrative
Episode	All the story grammar components working together

### 2.3.2. Linguistic complexity

Linguistic complexity, which serves as the “glue” of a narrative (see below), pertains to the speaker’s use of syntax, morphology, semantics, and pragmatics. The term “syntax” here refers to how words are put together in order to create sentences (Thomas, 2006, p. 1470), whereas “morphology” refers to the way in which words are constructed by means of stems, prefixes, and suffixes (Thomas, 2006, p. 193). More specifically, a stem is the main part of a word that does not change when the rest of the word changes. Prefixes are bound morphemes that are added to the beginning of a word to create a different word, and suffixes are morphemes added to the end of a word, to create a different word by either derivation (as in *unhappiness*) or inflection (as in (*walked*)) (Crystal, 1991). Semantics refers to “the meanings of words and sentences” (Thomas, 2006, p.1310) and pragmatics, in this context, refers to “the meanings and effects which come from the use of language in particular situations” (Thomas, 2006, p. 1120). Linguistic complexity creates cohesion between ideas and allows the speaker to create complex sentences that link events and allow episodes to flow coherently (Southwood & Van Dulm, 2012).

### 2.3.3. Use of evaluative information

The use of evaluative information allows the narrator the ability to share information beyond the basics of listing actions and protagonists. In other words, the narrator develops the ability to discern what information to include and what to leave out of a narrative as well as knowing how to keep the listener’s attention (Andreu et al., 2011). A skilled narrator is also able to

“have insight into the listener’s perspective, and to act on that insight” (Southwood & Van Dulm, 2012, p. 38). This is known as role-taking ability. Role-taking, in turn, is an important prerequisite for developing functional use of speech acts. A speech act is an action conducted through the use of language, for example stating, rejecting, commanding, describing, and questioning (Berman, 1988). Ultimately, the narrator is made aware of the internal mental states (feelings, desires, attitudes and beliefs) of their communication partners. The narrator’s thoughts are also triggered to imagine what emotions characters (real or fictitious) could be experiencing (Andreu et al., 2011; Berman, 1988). This concept is known as ‘theory of mind’ (Bruner, 1986).

## **2.4. The importance of well-developed oral narrative skills to school-going learners**

McCabe and Rollins (1994, p. 45) liken the process of creating a narrative to weaving a French braid. In order to successfully create a braid, many strands need to be interwoven. These strands are the language components, and these components are phonology, syntax, and morphology according to (McCabe & Rollins, 1994). Additionally, semantics and pragmatics can also be considered as necessary language components to complete the “narrative braid”. If one strand is out of place, the entire braid/narrative will be compromised.

In following the academic curriculum, teachers need to test learners’ abilities to produce both written and spoken narratives in a range of reading and writing tasks (Department of Basic Education, 2011). Research shows that narrative skills are central to literacy development and are also fundamental for the development of narrative comprehension abilities (see below). Furthermore, narrative skills can be considered an indication of higher level language development, that above sentence level (McCabe & Rollins, 1994; Seymour & Zurer Pearson, 2004).

Narrative practice is also important for learners to master the skills necessary for role-taking, speech acts, and theory of mind. These skills are important for the learner to “view a situation from another’s perspective, to take on another’s role, in order to correctly process spoken and written narratives, instructions, and question-answer discourse which is typical in the classroom situation” (Southwood & Van Dulm, 2012, p. 39). All these skills are prerequisites

for academic success within the classroom situation. Should a learner's narrative skills be delayed or compromised, s/he will not cope with increasing verbal and written social and academic demands (McCabe & Rollins, 1994).

According to Fey, Catts, Proctor-Williams, Tomblin and Zhang (2004, p. 1301), "story composition tasks are educationally relevant and should play a significant role in the evaluation of children with [specific learning disability – LS]". Research on reading indicates that kindergartners' story recall is one of the "strongest single predictors" of reading difficulty (Snow, Burns, & Griffin, 1998, pp. 110, 117). The assessment of narrative skills in young school-going learners is therefore an important responsibility facing Speech-Language Therapists (SLTs). Early identification of problems in narrative skill development is especially important for identifying children at risk for later learning and literacy-related difficulties (Hoggan & Strong, 1994; McCabe & Rollins, 1994; Southwood & Van Dulm, 2012). Similarly, early narrative skill intervention is essential in an attempt to lessen or even prevent future learning and reading difficulties (Fey et al., 2004; McCabe & Rollins, 1994; Roth et al., 1996).

## **2.5. Oral narrative skills development in learners developing typically**

Acker (2012, p. 9) explains that research on narrative skills is mostly conducted internationally, i.e. outside of the South African (or African, for that matter) context. She also states that existing research studies "often focus on different aspects of narrative development for different age groups and it is therefore hard to rely on existing literature for normative data" for the typical development of narrative skills. Most studies have also included a limited sample of each age and cultural group, thereby "impeding the compilation of norms" (Acker, 2012, p. 9). Most research relating to narrative skill development has also been conducted amongst learners with some form of language or other pathology (such as SLD, hearing disability or autism; see Acker, 2012; Boons, De Raeve, Langereis, Peeraer Wouters, & Van Wieringen, 2013; Southwood & Van Dulm, 2012; Stevens & Bliss, 1995; Ziatas, Durkin, & Pratt, 2003) and not amongst typically developing learners.

Acker (2012) does, however, indicate that a child's individual growth in narrative ability can be charted, regardless of the lack of developmental norms for narrative ability. In this regard,

McCabe and Rollins (1994), for example, classify the typical developmental stages of a narrative based on the narrative macrostructure of personal event narratives documented by American English-speaking children aged younger than 3 years 5 months to 6 years and older. This developmental classification includes five types of personal event narrative structures that can be expected from English-speaking children at different ages. Table 2 provides a brief description of these five types of personal event narrative structures.

**Table 2: Summary of narrative personal events linked to typical age and a description of narrative events [Source: McCabe and Rollins (1994)]**

<b>Narrative personal event &amp; typical age</b>	<b>Description of narrative personal event</b>
One event narrative (age younger than 3 years 5 months)	The child tells of a single event.
Two event narrative (age 3 years 5 months)	The child includes two past events but they are illogical or have no contextual relevance to the story.
Leapfrog narrative (age 4 years)	The child includes two or more related past events that are often out of sequence.
End-at-high point narrative (age 5 years)	The child includes two or more related past events in a logical sequence but without resolution.
Classic narrative (age older than 6 years)	The child includes two or more well-formed and related past events that are logical and that are finally resolved.

Another method for charting narrative development is the Developmental Schema by Applebee (1978, as cited in Hedberg & Stoel-Gammon, 1986). This descriptive method of documenting narrative development is linked to the learner's age and is based on six schemas. Table 3 is a summary of the six schemas related to various ages of learners.

Hedberg and Stoel-Gammon (1986) and Peterson and Spencer (2012) emphasise that a child needs to have attained a minimum MLU of three words before they can be expected to tell a story. Children who are able to string together three or more words in an utterance were also found to perform better at story grammar than their peers who were unable to do so. (Rice, Smolik, Perpich, Thompson, Rytting, and Blossom (2010) conducted a study of the MLU in words (MLUw) of typically developing learners and learners with SLD aged 2 years 6 months to 8 years 11 months. They found the MLUw for the typically developing learners aged between 8 years and 6 months and 8 years and 11 months to be 5 and the MLUw of the learners with SLD in the same age range to be 4.5. Considering that the learners chosen for my study are aged between 8 years and 6 months to 8 years and 11 months, one would expect them to have an MLU of 4.5 (or at least more than 3) and be able to tell a story.



**Table 3: Summary of the six schemas linked to typical age and a description of narrative development [Source: Applebee (1978), in Hedberg & Stoel-Gammon (1996)]**

Schema & typical age	Description of story in particular schema
Heaps (age 2 years)	The child's story includes lumps of information without links from one sentence to the next.
Sequences (age 2 to 3 years)	The child's story includes only one central character or setting, has no story plot, can present as retelling of a memorised story from a television show, and consists mostly of actions.
Primitive temporal narratives (age 3 to 4 years)	Goals within the story are sustained, but there is no resolving of problems. The story has a central character or setting. The child uses more pronouns and begins to comment on the internal state/s of characters. During this developmental period, the child starts to show more interest in listening to the narratives of their peers.
Unfocused temporal chains (age 4 years to– 4 years 5 months)	The child answers questions about what happened and why this occurred. There are no central characters, but there are logically sequenced events and cause-effect relationships. Stories have no middle, and the child frequently uses the conjunctions <i>and</i> and <i>but</i> to link ideas and events.
Focused temporal or causal chains (around age 5 years)	The child uses episodes within the story and tells entertaining stories. The stories are created around a main character. There are sequences of happenings that are linked to concrete events. These events become adventures that have a beginning, middle, and an ending. The characters' internal state information (emotions, feelings, thoughts and beliefs) is also implied.
Narratives (around age 6 years)	The child creates narratives that focus on an incident in a story. There is a plot, and the characters develop as the story unfolds through a sequence of related events. The centre of the story evolves as the story continues and the characters' motives are disclosed. In the story, there is also a problem that is resolved to create a credible ending.

There are few South African studies that focus on the narrative development of learners. In one such study, Acker (2012) conducted research amongst typically developing 5- to 9-year-old South African learners who attended Grades R, 1 or 3 in English-medium schools. These learners had English or Afrikaans as their home language, but all were required to perform the research tasks through the medium of English. The Grade R (age 5 to 6 years) results indicated that learners did not make use of story conventions such as opening or closing statements. This finding concurs with that of Hemphill, Picardi, and Tager-Flusberg (1991) who found that opening and closing statements develop around the age of 7 years 8 months. Acker's Grade R participants used story grammar components such as an initiating event, attempt, and direct consequence. The learners were also starting to make use of settings and internal responses. Hardly any of the learners were found to use internal plan statements or response statements in their narratives. The learners were also found to use abbreviated and

incomplete episodes in their narratives. Additionally, word diversity as well as linguistic complexity was starting to develop.

Grade 1 (age 6 to 7 years) results for Acker's (2012) study showed that the majority of learners initially created short but complete episodes that were emerging towards more complex episodes. Towards the end of the study, which spanned four weeks, the learners were also starting to create more linguistically complex episodes. Syntactic complexity and lexical diversity, however, were similar to that of the Grade R participants (Acker, 2012). The Grade 1 learners started to make use of story conventions including opening and closing statements. Their story grammar components included setting statements, initiating event, attempt; response statements; and direct consequence. However, the learners still did not make use of internal plan statements.

Grade 3 (age 8 years 6 months to 9 years 6 months) results for Acker's (2012) study showed that these learners' language demonstrated more syntactic and linguistic complexity than that of the younger participants. The learners produced complex narratives which included significantly more adverbs than in the other grades studied. The sentences used by the Grade 3s were notably more complex than those of the Grade Rs and Grade 1s due to their diversity of words. In addition, these learners included coordination and mostly subordination within sentences (Acker, 2012). They created narratives with the same story grammar components as the Grade Rs and Grade 1s but also included additional components such as a setting statement and reactions. Few Grade 3 learners, however, made use of internal plan statements.

Acker (2012) confirmed earlier research results obtained by Justice, Bowles, Kaderavek, Ukrainetz, Eisenberg, and Gillam (2006). Both studies showed that it was not uncommon for a typically developing learner to tell a narrative using complex macrostructure (story grammar) components but, in doing so, compromise microstructural (linguistic) elements.

Other factors that influence a learner's narrative creation abilities are his/her personality, motivation, and emotional and cultural factors (Bernat & Gvozdenko, 2005). In addition to these, learning styles and sensory modality (visual, auditory, kinetic) learning preferences of individuals also affect how typically developing children learn to create oral narratives (Gardner & Korth, 1998).

## 2.6. Oral narrative skills development in learners with specific learning disability

There is a growing body of research that indicates that learners who are late talkers and who experience language-related difficulties in early childhood also tend to struggle with narrative production and comprehension (Merritt & Liles, 1987; Southwood & Van Dulm, 2012). Children are typically diagnosed as late talkers when they present with delayed or disordered phonological and language skills by the age of 2 years (Manhardt & Rescorla, 2002). Research by Merritt and Liles (1987), amongst English-speaking learners with language impairment aged 9 to 11 years, indicated that late talkers relay incomplete and short story episodes, use few main and subordinate clauses per episode, and often fail to include all story grammar components. Similarly, Manhardt and Rescorla (2002) conducted a study of oral narrative skills with English-speaking learners who were diagnosed as late talkers. Results indicated that the late talkers scored poorly in all three domains of narrative development. In other words, learners who were late talkers did not fare well in terms of story grammar components, linguistic complexity, and overall evaluative information. Pertaining to linguistic complexity, findings from a study by Southwood, Carinus, and Engelbrecht (2010) concur that learners with SLD show delays in their use of discourse markers and present “with signs of different language development” (Southwood et al., 2010, p. 92)

Currently, researchers are not in agreement about what causes the challenges in narrative production and comprehension of learners with SLD. Researchers and linguists theorise that these challenges are either caused by representational malfunctioning or by processing deficits. Representational malfunctioning is believed to be caused by irregularities pertaining to the language acquisition device, and processing deficits are considered to occur due to slower cognitive processing (Andreu et al., 2011).

Due to the general lack of speech-language therapy services available and because of limited parental/caregiver awareness of communication milestones within the South African context, only a few children’s language skills have been screened by a Speech-Language Therapist (SLT) by the age of 2 years. Unfortunately, these children’s difficulties are often only formally identified and diagnosed when the learner starts to present with specific learning difficulties in Grade 1 (age 6 years). According to the *Diagnostic and statistical manual of*

*mental disorders* (DSM-5) (American Psychiatric Association, 2013) and Scanlon (2013), a learner is diagnosed as having a SLD when they already have at least a two-year backlog in specific academic learning areas such as reading, spelling, mathematics, and writing. Some of these learners have varying difficulties in more than one area of academic learning. Children with SLD, who struggle with reading, spelling and/or writing, have the tendency to struggle with higher level language learning such as narratives (Hearing and Speech Agency of Baltimore (HASA), 2014; Scanlon, 2013).

Research by Van der Lely (1997) indicates that learners with SLD produce narratives similar to those produced by younger typically developing learners. Paul, Hernandez, and Johnson (1996) found that learners with SLD produce fewer story grammar elements and create less mature narratives than typically developing peers. A longitudinal narrative study of English-speaking learners with SLD, in preschool, second and fourth grades, was conducted by Fey et al. (2004). Results of this study indicated that the learners produced narratives that contained a limited number of words, and that the overall quality with regards to content, organisation, and style was lower than in typically developing peers. These findings are similar to those of other researchers (e.g., Greenhalgh & Strong, 2001; Thordardottir & Weismer, 2002). Other research studies have shown that learners with SLD produce compromised narratives in terms of organisational structure, length, complexity, cohesion, use of tenses; semantics, syntax, and use of pronouns (see Andreu et al., 2011; Bishop & Donlan, 2005; Norbury & Bishop, 2003; Van der Lely, 1997). Overall, these learners presented with difficulties beyond the production of grammatical sentences, and their narrative comprehension and story recall skills were affected (Paul, Hernandez, & Johnson, 1996).

Another study on narratives, by Stevens and Bliss (1995), considered conflict resolution and role enactment abilities of learners with SLD. The findings of their study indicated that learners struggled to find resolution strategies and did not perform well on role enactment. In addition, a study by Farrant, Fletcher, and Maybery (2006), which focused on theory of mind and visual perspective-taking, reported that both these abilities were lacking in the narratives produced by the learners with SLD. A study by Ziatas et al. (2003) also indicated that speech acts in learners with SLD are compromised. Furthermore, McCabe, Bliss, Barra, and Bennett (2008) compared personal versus fictional narratives of learners with SLD and found that “the quality of personal narratives exceeds that of fictional narratives produced by children with [specific learning disability – LS]” (McCabe et al., 2008, p. 202).

In summary, international researchers have indicated that learners with SLD are prone to experiencing problems with narrative comprehension and production, tasks requiring theory of mind, story grammar, and with role-taking to perform and understand speech acts (Southwood & Van Dulm, 2012). This Master's study reports on the narrative skill development of learners with SLD within the South African context. My study serves to fill a gap in South African research on narrative development and to provide therapy guidelines for the South African context regarding narrative intervention with learners with SLD whose home language is Afrikaans. In the next section, I discuss the manners in which oral narrative skills are typically assessed, both abroad and locally.

## **2.7. Ways of assessing learners' oral narrative skills**

Narrative sampling and assessment thereof allows the SLT to identify key skills required for the transition to a literate style of language. Additionally, eliciting oral language beyond sentence level provides invaluable information about a learner's broader communicative competence (Allan & Leitaio, 2013). Current practice in the field of speech-language therapy generally employs fictional narratives in the assessment, intervention, and study of children with SLD (Hay & Moran, 2005; Justice et al., 2006; Swanson, Fey, Mills, & Hood, 2005). As mentioned previously, McCabe et al. (2008) found that learners performed better with personal narratives than with fictional narratives. This could have implications for future assessment measures and therapy goals depending on the type of narrative being elicited.

There are many narrative assessment tools available commercially and online, but these tools are not always appropriate for the South African population due to "the complex nature of narratives; social-economic, linguistic and cultural factors" (Acker, 2012, p.37). The focus of assessment by a SLT within the South African context is largely on learners' language development and not on higher level skills such as narrative comprehension and production. Learners' narrative skills are, however, of interest in speech-language therapy and are being assessed by SLTs worldwide. To explore what SLTs are currently using to assess narratives, I used a social media closed-group site called "Speech Language Pathologists at Large" (SLPAL) to find out what current oral narrative assessment practices are used in countries outside South Africa. The SLTs who responded to my online post came from a variety of different international locations including Australia (Sydney, Tasmania); Barbados; Canada

(Toronto); Spain; and the United States of America (Arizona, California, Georgia, New York, Seattle, Washington). Below, I mention each of the frequently used instruments mentioned by the SLTs on the site. I then briefly discuss each instrument. These discussions were informed by the relevant online publisher catalogues.

### **2.7.1. Assessment protocols used by Speech-Language Therapists from countries outside South Africa**

The SLTs, who responded to my online post for information about types of narrative assessment, listed seven different assessment instruments. These are (i) the *Test of narrative language* (Gillam & Pearson, 2004), (ii) the *Narrative language measure* (Peterson & Spencer, 2012), (iii) *Expressive, reception and recall narrative instrument* (Bishop, 2004), (iv) *Assessment of comprehension and expression 6–11* (Adams, Cooke, Hesketh, & Reeves, 2001), (v) *Bus story* (Renfrew, 1997), (vi) *Emerging language and literacy assessment* (Wiig & Secord, 2006), and (vii) *Squirrel Story* (Carey, Allan, & Leitao, 2006) and *Peter and the cat* (Allan & Leitao, 2013) (see Appendix 1). I now present information about each assessment tool. In addition, I consider if these assessments tools could be adapted for the assessment of Afrikaans-speaking learners' narrative skills. As stated above, the discussion of each instrument was informed by the relevant publisher's catalogues. It needs to be taken into consideration that, for all the assessment measures mentioned, the impressions regarding the appropriateness of stimuli/instruments are also based on personal judgement.

#### **2.7.1.1. *Test of narrative language* (Gillam & Pearson, 2004)**

The *Test of narrative language* (TNL) has been standardised to assess English-speaking learners from Grade R to Grade 6. It consists of a set of sequence cards and picture scenes, and measures a learner's ability to answer questions about stories, to retell stories, and to create generic stories from a given picture. Three types of cues are given during story elicitation: no picture cues, sequence picture cues, and single-picture cues. A raw score, age equivalent rating, percentile rank, and narrative language ability index can be calculated. Standardised scores are based on English normative data from the United States. The TNL sequence cards and picture scenes are relatively culture diverse, however, test stimuli including pictures of aliens, spaceships and dragons are not entirely appropriate in the South African context for assessing Afrikaans-speaking learners' oral narrative skills. The comprehension test questions will need to be translated into Afrikaans and vocabulary and

item/concept reference adaptations may be required. The test will, however, need to be scored qualitatively because the test has only been standardised for English-speaking learners in the United States.

#### **2.7.1.2. *Narrative language measure (Peterson & Spencer, 2012)***

The *Narrative language measure (NLM)* is a battery of tests that measure various dimensions of narrative language. Currently, the *NLM* includes three subtests for preschool (Grade R) and school-aged children (Grades 1 to 3), namely the *Test of narrative retell*; the *Test of story comprehension* (available soon for school-age children); and the *Test of personal generation*. Each of the *NLM* subtests contains 40 short stories that have a consistent structure, length, and language complexity. The *NLM* preschool and school-aged stories highlight events that young children are likely to experience. These stories are pivotal to the *NLM* and promote a standardised, reliable, and valid assessment of narrative skills. This instrument has been standardised for English-speaking learners in the United States. The *NLM* picture scenes are culturally diverse and are appropriate for the South African context and for assessing Afrikaans-speaking learners' oral narrative skills. The comprehension test questions will need to be translated into Afrikaans and vocabulary adaptations may be required. The results of the test will, however, need to be interpreted qualitatively because local norms are not available.

#### **2.7.1.3. *Expressive, reception and recall narrative instrument (Bishop, 2004)***

The *Expressive, reception and recall narrative instrument (ERRNI)* assesses a learner's ability to relate, comprehend, and remember a story after a delay. This test was designed for persons from 6 years to adulthood. It provides a great deal of information about learners' narrative skills. The test comprises a sequenced story of 15 scenes. Retell of "The beach story" or "The fish story" is recorded with and without visual cues, and a series of comprehension questions are completed. Samples are then transcribed and analysed. The following measures are considered in the analysis: amount of relevant story content provided; complexity of grammatical structure; comprehension of the pictured narrative; and forgetting, which reflects storage of information in the long term memory. The *ERRNI* analysis is based on standardised English language results from the United Kingdom. The *ERRNI* picture scenes are culturally diverse enough to be suitable for use in the South African context and for assessing Afrikaans-speaking learners' oral narrative skills. Questions will need to be translated into Afrikaans and some vocabulary and item/concept adaptations may be



indicated. The results of the test will, however, need to be interpreted qualitatively because the test has only been standardised for English-speaking learners in the United Kingdom.

#### **2.7.1.4. *Assessment of comprehension and expression 6–11* (Adams et al., 2001)**

The *Assessment of comprehension and expression 6-11* (ACE: 6-11) is used to assess the language of learners who are suspected of having a language delay or disorder. Learners are expected to look at pictures, answer questions, and tell narratives based on the pictures. This test includes evaluation of sentence comprehension, inferential comprehension, syntactic formulation, semantic decision-making, non-literal comprehension, and narrative skill development. This assessment protocol is a standardised assessment tool based on normative data from English-speaking learners aged 6 to 11 years who reside in the United Kingdom. The *ACE: 6-11* picture scenes are culturally diverse and are thus directly applicable to the South African context and are suitable for assessing Afrikaans speaking learners' oral narrative skills. Questions will need to be translated into Afrikaans and some vocabulary and item/concept adaptations may be required. The responses will, however, need to be scored qualitatively because of the lack of South African norms, as the test has only been standardised for English-speaking learners in the United Kingdom.

#### **2.7.1.5. *Bus story* (Renfrew, 1997)**

The *Bus story* for narrative assessment was devised to assess learners aged 3 to 8 years. This test comprises a set of sequence cards, pertaining to an animated bus, that are provided to encourage narrative elicitation. A set of norms is available for English speakers from the United Kingdom. These norms enable SLTs to assess emergent language proficiency by means of narrative sample analysis. The *Bus story* picture sequences are culturally appropriate for the South African context and have already been translated into Afrikaans (although the translated test has not been standardised yet). This test can therefore be considered as an informal assessment measure for Afrikaans oral narrative skills (Van Dulm & Southwood, 2013).

#### **2.7.1.6. *Emerging language and literacy assessment* (Wiig & Secord, 2006)**

The *Emerging language and literacy assessment* (ELLA) is the only test of emerging literacy and language with a story retell section. This test is suited for learners aged 4 years 6 months to 9 years 11 months and is normed for English-speaking learners in the United Kingdom.



This test uses three story books to evaluate the skills learners need to become proficient readers. The *ELLA* is thus a narrative-based diagnostic tool to identify learners who are at risk for reading difficulties. The *ELLA* picture scenes are culturally diverse and are appropriate for use with South African children and for assessing Afrikaans-speaking learners' oral narrative skills. The three books will need to be translated into Afrikaans and, where necessary, vocabulary and item/concept adaptations may be required. The test will, however, need to be scored qualitatively because the test has only been standardised for English-speaking learners in the United Kingdom.

#### **2.7.1.7. *Squirrel story* (Carey et al., 2006) and *Peter and the cat* (Allan & Leita, 2013)**

The *Squirrel story* and *Peter and the cat* as assessment protocols were developed in Western Australia for assessing children who speak a variety of English dialects. Learners aged 5 to 9 years are the target group for this assessment. These tests provide a descriptive profile of a learner's development of key narrative competencies. *Squirrel story* and *Peter and the cat* are stories that are used as tools for deciding on therapy goals and for obtaining pre- and post-intervention data. Currently there is an iPad version of these assessments which use the same profiling of language and narrative skills but additionally brings together an illustrated e-book with voice-overs. The voice-overs on the program can be chosen from a selection of United Kingdom, United States, Australian and South African English accents. This App does not include translations for other languages such as Afrikaans. The storyline and graphics are appropriate for the South African context. Should this story be translated into Afrikaans, this iPad oral narrative test will be appropriate for Afrikaans speakers in the South African context.

#### **2.7.2. Assessment protocols used by Speech-Language Therapists in South Africa**

In South Africa, normative based assessment materials are very limited, and according to Acker (2012, p.16), "there is currently no single assessment protocol that provides an overall view of narrative skills." Some of the protocols used in South Africa for the assessment of narrative abilities are (i) *The bus story* (Renfrew, 1997), (ii) informal use of a subsection 'temporaal opeenvolgende relasies' from the *Afrikaanse semantiese taalevalueringmedium* (Pretorius, 1989), (iii) the *Toets vir mondelinge taalproduksie* (Voster, 1980), (iv) *Frog, where are you?* (Mayer, 1969), and (v) *Multilingual assessment instrument for narratives (LITMUS: MAIN)* (Gagarina et al., 2012). As stated above, *The bus story* (Renfrew, 1997) is

also used internationally, and *Frog, where are you?* (Mayer, 1969) is used in many international research studies on narrative skills. The *LITMUS: MAIN* (Gagarina et al., 2012) has many language versions, and is included in this subsection (even though it is also used abroad) because it has Afrikaans, isiXhosa, and South African English versions and was co-developed by South Africans. These five instruments are discussed below.

#### **2.7.2.1. The *bus story* (Renfrew, 1997)**

As mentioned in section 7.1.5, this story can only be used qualitatively within the South African context because it is only standardised for British English-speaking children aged 3 to 8 years. The sequence cards can, however, be used quantitatively in terms of calculating the MLU and determining how many subordinate clauses are used by the learners within their narratives. There is a nonstandardised Afrikaans version available, and this version is frequently used by South African SLTs (Van Dulm & Southwood, 2013).

#### **2.7.2.2. Informal use of a subsection ‘*temporaal opeenvolgende relasies (subtoets vyf)*’ of the *Afrikaanse semantiese taalevalueringsmedium* (Pretorius, 1989)**

This subtest contains a range of two- to eight-picture sequence cards that can be used to elicit oral narratives. The subtest was specifically designed and standardised for Afrikaans-speaking South African learners aged 3 years to 11 years 11 months. After being transcribed, these narratives can be scored according to a point system, and these scores can then be compared to normative data to obtain an age equivalent. Further quantitative analysis may include calculating the MLU. Narratives generated from this subtest can also be informally and qualitatively assessed in terms of identifying story grammar components. The picture material is, however, outdated and the test is not frequently used by South African SLTs (Van Dulm & Southwood, 2013).

#### **2.7.2.3. The *Toets vir mondelinge taalproduksie* (Vorster, 1980)**

This test comprises four sequence picture strips, each with four photographs, to elicit a comprehensive language sample. This test was designed for Afrikaans-speaking South African learners aged 4 years 6 months to 10 years 5 months. It assesses 16 aspects of oral language production in children including measures of syntactic complexity, correctness, fluency, content, and productivity. This test was traditionally used to assess language but the narratives generated can also be informally and qualitatively assessed in terms of narrative components in terms of MLU and use of subordinate clauses. The photographs are however

outdated and portray persons from one ethnic group only, and the test is not frequently used by South African SLTs (Van Dulm & Southwood, 2013).

#### **2.7.2.4. “Frog, where are you?” (Mayer, 1969)**

This test, devised by Mayer (1969), is based on a wordless picture book in which a boy is searching for a frog. The test was devised and standardised for British English-speaking learners aged 4 years and older. This test could be translated into Afrikaans, the oral narratives can be scored, and interpretations can be made qualitatively; however, this test is not well suited for the South African context. Cultural, linguistic and socio-economic biases occur in the picture material, thereby making the test an unlikely first option for testing Afrikaans oral narrative skill development.

#### **2.7.2.5. Multilingual assessment instrument for narratives (LITMUS: MAIN) (Gagarina et al., 2012)**

This test is designed to assess the narrative skills of “learners who acquire one or more languages from birth or from an early age” (Gagarina et al., 2012, p. 1). This test has been piloted for 15 different languages, including South African English and Afrikaans, and is suitable for learners aged 3 to 10 years. Learners are required to tell or retell a narrative based on a set of six-picture sequence cards. There are four such sequences available. The four stories – including two sets of similar stories – are “controlled for cognitive and linguistic complexity” (Gagarina et al., 2012, p. 1). This instrument can therefore be used as a pre- and post-intervention assessment tool. The *LITMUS: MAIN* has not yet been norm-referenced but has a scoring sheet including two sections, one for production and the other for comprehension.

In the production section, each of the four stories comprises three episodes. Each of the three episodes of each story is scored in terms of its macrostructure/story grammar structure. In other words, the score is determined based on whether or not the episode contains a setting, an internal state as an initiating event, a goal, an attempt, an outcome, and an internal state term as a reaction. The structural complexity of the narrative is then assessed, based on tallying various combinations of story structure components, and internal state terms are identified (indicating awareness of feelings and attitudes of the characters). In section 2, the comprehension part, the learner is asked 10 questions pertaining to the story they have (been) told (Gagarina et al., 2012).

Once these narratives have been transcribed, the content of the narratives can also be assessed in terms of their microstructure. This includes a wide range of linguistic aspects such as measures of length, lexis, morphosyntax, discourse and bilingual phenomena (such as code switching), and cross-linguistic transfer (Gagarina et al., 2012). For the purposes of this study, the *LITMUS: MAIN* in Afrikaans has been chosen as the most comprehensive, theoretically updated, culturally appropriate and user-friendly tool to assess the oral narrative abilities of Afrikaans-speaking learners. This tool was therefore used as the pre- and post-intervention assessment measure for the study.

## **2.8. Therapy approaches used to develop learners' oral narrative skills**

Hoggan and Strong (1994) summarise 20 narrative intervention strategies used by SLTs to teach narrative skills. After “an extensive search of the literature”, Hoggan and Strong (1994, p. 76) found that there are three stages of narrative intervention, namely pre-story preparation (before narratives are formally introduced), during-story presentation, and post-story presentation (after telling and listening to narratives). During each of the three stages, various strategies were implemented by SLTs. These are discussed below.

As regards pre-story preparation, the following strategies were identified as preparing learners for narrative production and comprehension (Hoggan & Strong, 1994, pp. 78-79): (i) so-called “preparatory sets” (creating book awareness); (ii) summarising (teaching learners how to condense their thoughts and to remember the main points of the story); (iii) semantic word mapping (helping learners to understand words within the context of the story); (iv) think-aloud tasks (encouraging the learners to verbalise memories of what they have heard); (v) directed reading/thinking activities (encouraging learners to anticipate outcomes, ask questions, and reflect on or decipher implied meanings), and (vi) music (learning language and learning how to tell narratives through listening to narrative-based songs and rhymes).

Concerning the story presentation stage, the following strategies were identified as useful to teach learners how to create a narrative (Hoggan & Strong, 1994, pp. 80-81): (i) extensions (helping learners to clarify and guide their abstract thoughts in order to gain a better understanding of the narrative); (ii) questioning (asking learners to share their understanding of what they have heard and to teach them how to become more critical thinkers and astute

narrators); and (iii) episode/story mapping (supporting narrative comprehension and production by teaching learners how the elements “setting, problem/goal, major episodes, theme and resolution” (Hoggan & Strong, 1994, p.81) are essential to form cohesive narratives).

Regarding post-story presentation, the following strategies were identified as useful for teaching learners how to understand the narratives they told themselves and those they were told by others (Hoggan & Strong, 1994, pp. 81-84): (i) question-answer relationships (answering questions and encouraging learners to search for answers to gain better comprehension of what they have heard); (ii) internal state-related activities (for example, identifying feelings and attitudes of the characters); (iii) word substitutions (identifying and creating similes and antonyms to gain a richer command of narrative language); (iv) discussion webs (encouraging debates about absurdities and events in order to strengthen narrative reasoning skills); (v) flow charting (after reading the story out loud, encouraging the identification of main events within the narrative); (vi) story retelling (to help the learners to sharpen their comprehension of extended language units); (vii) story grammar cuing (describing and identifying the components of a story); (viii) journals (enhancing writing and story memory, moving from the oral to the written modality); and (ix) art activities (illustrating the story to remember the events and to create a visual representation of the progression of episodes).

Hoggan and Strong (1994) provide a comprehensive and useful discussion of the strategies used to facilitate narrative development. Since 1994, however, various new strategies are being used by SLTs worldwide. There are also many intervention tools available online, but without prior knowledge of their existence, these tools are difficult to retrieve. After posting another request for information on the SLPAL webpage, asking for suggestions on narrative skill intervention strategies, a number of SLTs from various countries outside South Africa responded to my online post. These SLTs were from Australia (Sydney, Tasmania); Barbados; Canada (Toronto); Portugal (Amora); Spain; and the United States of America (Arizona, California, Georgia, New York, Seattle, Washington) (see Appendix 2). The instruments and strategies that they mentioned are briefly discussed below. These discussions were informed by the relevant online publisher catalogues.

### **2.8.1. Tests/strategies/interventions for narrative development used by Speech-Language Therapists from countries outside South Africa**

The SLTs who responded to my online request on the SLPAL webpage for information about what they used for learner narrative development provided information on 10 different interventions, namely (i) *Braidy the story braid* (Moreau, 2013a), (ii) *Story grammar marker* (Moreau, 2013b), (iii) *Talk to write, write to learn* (Moreau, 2013c), (iv) *Theme maker* (Moreau, 2013d) 5), (v) *Story champs* (Spencer & Peterson, 2010), (vi) *Speaking and listening through narrative* (Shanks, 2011), (vii) *Comic strip conversations* (Gray, 1994), (viii) *The story wheel* (Byrne, 2011), and (ix) *Rory's story cubes* (O'Connor, 2005). I now present information about each intervention strategy. In addition, I consider if these strategies could be adapted to promote narrative development in Afrikaans-speaking learners.

#### **2.8.1.1. *Braidy the story braid* (Moreau, 2013a)**

*Braidy*, developed by SLP Moreau (2013a) who had the desire to assist children in all areas of their academic learning, is an emergent literacy tool in the form of a child-sized puppet called “Braidy”. She is used to support narrative development in learners from preschool to Grade 2, fostering the oral language development necessary for a young learner’s listening and reading comprehension, writing, critical thinking as well as social-emotional growth (Moreau, 2013a). The puppet is made of material and comes in different skin colours; as such, she is suited to any therapy or classroom intervention context. Braidy has braids to which material rings are attached. For each idea in a list of events or narrative, a ring is pulled down the braid. Once all rings have been pulled down the braid, the list or story ends. This provides the learner with a visual as well as a tactile means of understanding the parts of a story and the interrelationships among the parts. In addition, this puppet assists learners in developing an understanding about the use of language. The *Braidy* doll concept is universally applicable and has proven useful for fostering basic narrative development in English-speaking learners who are in mainstream as well as learners with autism and/or SLD in special education classrooms (Moreau, 2013a). *Braidy* is a readily applicable intervention strategy that could be used as a strategy for teaching Afrikaans-speaking learners oral narrative skills.

### **2.8.1.2. *Story grammar marker* (Moreau, 2013b)**

The *Story grammar marker* (SGM) is a colourful, hands-on activity guidebook. Its target age group is learners in Grades 3 to 5. It is a useful tool for narrative development as it focuses on retelling, telling, writing, and comprehending stories (Moreau, 2013b). The suggested activities encourage learners to externalise the macrostructure of their narratives, thereby allowing them to concentrate on literate language features (which form part of microstructure) (Moreau, 2013b). The SGM has proven useful for developing basic narrative skills in English-speaking learners who are in mainstream as well as learners with autism and/or SLD in special education classes (Moreau, 2013b). SGM narrative teaching resources are also available online on a website for *MindWing Concepts*. These resources constitute a wealth of pre-devised story-based lesson plans that could be translated into Afrikaans. The instructions, explanations and some of the illustrations, however, will need to be culturally adapted in order to be suitable for use with Afrikaans-speaking learners.

### **2.8.1.3. *Talk to write, write to learn* (TTW, WTL) (Moreau, 2013c)**

*Talk to write, write to learn* (TTW, WTL) is an activity booklet suited for Grades 2 to 7. This booklet suggests a classroom program that can be used in combination with classroom writing programs to strengthen and develop oral narrative skills which, in turn, will serve as a foundation for comprehension and writing skills (Moreau, 2013c). This program is designed to target narratives associated with content area subjects such as science and social studies. TTW, WTL has proven useful for teaching basic narrative skills to English-speaking mainstream learners as well as learners with autism and/or SLD in special education classrooms (Moreau, 2013c). This activity booklet will need to be translated and some of the pictures will need to be culturally adapted before it can be considered as an intervention tool for Afrikaans-speaking learners within the South African context.

### **2.8.1.4. *Theme maker* (Moreau, 2013d)**

*Theme maker* is an activity booklet similar to TTW, WTL but suited for learners in Grades 7 through high school. *Theme maker* is a uniquely designed approach to teach learners how to visualise, organise, comprehend, and write non-fiction/informational material (Moreau, 2013d). This activity booklet can be presented as a learner workshop to focus on high level narratives (novels/chapter books) and content (theme-related text). *Theme maker* also helps learners to develop higher level awareness skills in comprehension, writing, perspective-taking, conflict resolution, and problem solving (Moreau, 2013d). *Theme maker* has also



proven useful for encouraging and teaching basic narrative development skills to English-speaking learners who are in mainstream as well as learners in special education classrooms that present with autism and/or SLD. Like the other material developed by Moreau discussed here, this activity booklet will need to be translated before it can be used with Afrikaans-speaking learners. The instructions, explanations and some of the illustrations will also need to be culturally adapted in order to be of use for Afrikaans-speaking learners.

#### **2.8.1.5. *Story champs* (Spencer & Peterson, 2010)**

*Story champs* is a multi-layered language intervention approach for preschool to Grade 3. The program teaches story structure and complex language features necessary for coherent storytelling. There are 12 stories included in the intervention kit which comprise two versions – Level A (for teaching basic story structure and language features) and Level B (for teaching more complex story structure and language features). There are five steps in the *Story champs* program:

Step 1: Model the story using sequence pictures

Step 2: Story gestures: Retell the story using sentences and gestures for each picture

Step 3: Team retell: The SLT asks questions about the story sequence cards

Step 4: Partner retell: A leader is chosen to listen and check a partner retelling the story. A token board is provided to check for correct retelling of story events

Step 5: Champs Ceremony, where the learners are congratulated for telling good stories.

The producers of *Story champs* suggest that this program be used in addition to the *TNR*. The program will need to be translated into Afrikaans and the instructions; explanations and some of the illustrations will need to be culturally adapted in order for this program to be of use for Afrikaans-speaking learners.

#### **2.8.1.6. *Speaking and listening through narrative* (Shanks, 2011)**

This resource comes in an 80-page book format with various activities to teach narrative skills within the therapy and classroom context. This book includes 144 colourful pictures and 143 black and white duplicates to encourage learning of narrative building concepts such as: Who are the characters?; Where do the events take place?; What happened next?; and What happened at the end? The aims of the lesson plans are to improve understanding of language, to enrich expressive language, and to sharpen attention and listening skills. This book contains universally applicable concepts and pictures to teach narrative development



skills to young learners from preschool to primary school. However, the activities will need to be translated into Afrikaans before use with Afrikaans-speaking learners.

#### **2.8.1.7. *Comic strip conversations* (Gray, 1994)**

*Comic strip conversations* (CSCs) is a written and oral narrative-based approach devised by Gray (1994). This approach was primarily designed to teach learners with autism how to create pragmatically appropriate oral narratives in various communication contexts (Gray, 1994). This approach makes use of simple stick figure drawings and speech bubbles to visually outline a conversation between two or more conversational partners. These drawings serve to demonstrate and allow the learner to practice every day oral narratives, first in written form and then practically in role-played communication settings. CSCs are based on the notion that visual aids may improve comprehension of social situations and oral narrative abilities in learners with autism (Gray, 1994). Progress is measured by positive changes noted in the use and social appropriateness of the oral narratives generated. This approach has thus far only been used with English-speaking learners but the concept could be said to be universally applicable. The narrative generation principles of the approach can be taught in Afrikaans as the medium of instruction. This approach has immediate potential for teaching oral narrative skills to Afrikaans-speaking learners.

#### **2.8.1.8. *Story wheel* (Byrne, 2011)**

*Story wheel* was created by Byrne (2011) for use in the classroom. *Story wheel* is as an App for the iPad and iPhone that is designed to promote storytelling. Learners aged 5 to 8 years are encouraged to spin the story wheel on the program and when it lands on an image, the learner is required to dictate a short story based on that image. The story is recorded as soon as the game starts and when the learner has finished telling the story, s/he can play the story back with animations generated by the *Story wheel* App. The basic *Story wheel* App is free and is available in four different languages: English (American), Arabic, Simplified Chinese, and Spanish. This App does not have an Afrikaans voice-over. Pictures are generally culturally diverse; therefore, should the program be translated into Afrikaans, it could prove as a useful narrative teaching device for Afrikaans-speaking learners.

#### **2.8.1.9. *Rory's story cubes* (O'Connor, 2005)**

*Rory's story cubes* is a board game that was primarily created to encourage learners 8 years and older to create narratives. The game includes nine cubes with an icon on each face of the

cube. In total, there are 54 different icons. The game is appropriate for group work and allows one to 12 players to participate. Players each take a turn to roll the nine cubes and add events to a story that is based on the icons that land face upwards. For example, the first player must say, “Once upon a time” and then roll the first cube. Once looking at the icon that faces him/her, the player starts telling the story based on the icon. The story ends after the ninth cube is rolled and the nine random icons have been interpreted in the form of an oral narrative. The game has various icons available to accommodate different cultures. There are also a variety of cube themes to purchase (for example, actions and voyages). Cube icons are available for the following languages: English, Afrikaans, Dutch, Japanese, Hungarian, French and Polish. Therefore, this game in its current form readily allows oral narrative intervention with Afrikaans-speaking learners.

### **2.8.2. Tests/strategies/interventions for narrative development used by Speech-Language Therapists in South Africa**

Some of the interventions for narrative development used in South Africa are (i) story sequencing cards including games such as *Before & after* (N.A, 2006); *What’s next?* (Kumar, 1988); and *En dan?* (N.A, 2008); (ii) story-building board games such as *The witch’s cauldron* (Kubler, 1984), (iii) *StoryBoards* (Durham, 2011), (iv) *Never ending stories* (NA, 1994), (v) *Receptive and expressive activities for language therapy* (Southwood & Van Dulm, 2012), (vi) *Wordless picture book: The day the bicycle was stolen* (Acker, 2005), and (vii) finger/hand puppets. Each of these is discussed below.

#### **2.8.2.1. Story sequencing cards**

Examples of story sequencing cards are *Before & after* (N.A, 2006), *What’s next?* (Kumar, 1988), and *En dan?* (N.A, 2008). For these examples, the cards are sets of three, four and six story sequencing cards, respectively. These cards are suited for teaching narrative building skills. The cards can be used for both English- and Afrikaans-speaking learners aged 3 to 5 years old.

#### **2.8.2.2. Story building board games**

An example of a story-building board game is *The witch’s cauldron* (Kubler, 1984). This board game can be used to encourage learners to produce stories based on correcting

absurdities. The game is suited for learners aged 4 years and older. The instructions can be translated into Afrikaans to encourage Afrikaans-speaking learners to partake in the game.

#### **2.8.2.3. *StoryBoards* (Durham, 2011)**

*StoryBoards* (Durham, 2011) is a narrative building game for learners aged 5 to 9 years. *StoryBoards* helps learners to visualise and practice telling a narrative by identifying the essential elements of storytelling and by teaching learners how to organise their ideas. This game also encourages vocabulary development. The instructions can be translated into Afrikaans to encourage Afrikaans-speaking learners to partake in the game.

#### **2.8.2.4. *Never ending stories* (N.A, 1994)**

*Never ending stories* (N.A, 1994) is an innovative game to encourage the production of more lengthy and creative narratives. This game accommodates groups of two to four players. The game is suited for learners aged 6 years and older. Learners randomly pick eight cards from a bag. The first player to pick the card saying ‘Once Upon a Time’ starts the story based on what is depicted on the selected card. Each player then uses their cards to add to the story when it is their turn. The board game leads the players to question and action cards that make the process of creating a narrative educational and fun. In the end, the board game leads the learners to land on a sad, happy, surprised, or scary option. The learners then need to end their story accordingly. The instructions, question and action cards can be translated into Afrikaans to encourage Afrikaans-speaking learners to partake in the game.

#### **2.8.2.5. *Receptive and expressive activities for language therapy (REALt)* (Southwood & Van Dulm, 2012)**

This picture-based therapy material was devised by Southwood and Van Dulm (2012). The material consists of a series of stand-up pictures that target language production concepts as well as narrative skill development. This resource encourages learners to produce short as well as longer narratives, teaches role-taking for speech acts and encourages learners to reason about the false belief of characters within the picture stories. The material is suited for use with 4- to 9-year-olds, is culturally appropriate for all learners within the South African context, and is available in Afrikaans.

#### **2.8.2.6. Wordless picture book: *The day the bicycle was stolen* (Acker, 2005)**

SLPs routinely tell made-up stories or read stories to the learners to encourage narrative and comprehension skill development. Thereafter, the learners are asked questions to encourage comprehension skills and to make them aware of the stages (beginning, middle and end) of a narrative. A similar technique has been used by Acker (2005) who created a book called the *Wordless picture book: The day the bicycle was stolen*. The story is about an African boy and a stolen bicycle. It comprises 14 colour pictures and was illustrated to suit the South African context for all learners aged 5 years to 9 years 5 months. These pictures are also able to help elicit ample story grammar statements such as plans and reactions as well as cause-effect relationships. The book can be used qualitatively as, even though it is intended as a test, it does not yet have normative data (Acker, 2005).

#### **2.8.2.7. Finger/hand puppets**

SLTs often use finger/hand puppets to encourage narrative production and to teach learners of all ages about the various stages (beginning, middle and end) in a story. The SLT uses the puppets to encourage learners to listen to and create narratives. The SLT tells a story in the language s/he is trying to encourage narrative skill development. By using visually stimulating puppets and by giving each puppet their own quirky voice the SLT promotes listening skills and makes narrative production a fun and unthreatening exercise. After the SLT tells the story, the learners are usually instructed to retell the story by reenacting the events and voices using the puppets. Later the learners are encouraged to create their own stories using puppets of their choice. Using puppets to tell stories is a common method of teaching oral narrative skills and creative language to learners. This method is therefore directly applicable for teaching Afrikaans-speaking learners oral narrative skills.

### **2.9. Conclusion**

SLTs are able to play an important role in assisting learners to develop narrative skills. The ability to use narrative skills in listening to and telling stories, in turn, influences reading and other learning-related activities (Snow et al., 1998). The ability to engage in listening and storytelling is of particular value for learners in the foundation phase (Grades 1 to 3). These learners often engage in informal activities involving stories before commencing with more formal literacy skills.

Learners presenting with SLD are more at risk for academic failure in learning situations than are typically developing learners (Greenhalgh & Strong, 2011). Early assessment and development of narrative skills for learners with SLD is thus essential to overcome further learning difficulties.

As can be expected, internationally and nationally, there are a number of assessment protocols and narrative development interventions that are available for English-speaking learners. However, for Afrikaans-speaking young learners, there are only a limited number of fully documented and readily available options to assist learners with SLD in narrative development.

For this study, I wish to explore the use of the Sandtray Play Approach (STPA) (Smith, 2012) for narrative development in Afrikaans-speaking young learners with SLD. This approach is based on kinesthetic and hands-on experiences to encourage narrative development. The benefits of using kinesthetic and hands-on experience to aid learning have not been fully explored (Crais & Lorch, 1994; Smith, 2012) to teach narrative development skills by SLTs internationally or nationally. I wish to explore the potential of Smith's (2012) STPA for future use in SLT narrative intervention practice. In the next chapter, I discuss this approach in depth.

## **Chapter 3: The Sandtray Play Approach**

### **3.1. Introduction**

Conventional speech-language therapy focuses on language development up to the sentence level and does not usually include a strong focus on narrative development. Learners who have achieved functional language skills in therapy, however, often still fail with higher level language-based tasks such as narratives. This study focuses on narrative development using the Sandtray Play Approach (STPA) (Smith, 2012) as implemented by an education-based Speech-Language Therapist (SLT). More specifically, this study explores narrative development using sandtray play with learners who experience specific learning disabilities (SLDs).

This chapter commences by describing the advantages of using a play-centered approach, and then explores the potential of kinetics/movement to facilitate language development. Thereafter, the history and development of the STPA and strategies employed in this approach are described. Some of the uses of the STPA for different clinical populations and future possibilities for its use in speech-language therapy practice are provided. Finally, criticisms levelled against using Sandtray approaches are considered.

### **3.2. Advantages of using a play-centered approach with children**

According to Lifter and Bloom (1998) (as cited in Lifter, Mason & Barton, 2011, p. 283), “play is the expression of internal states – the representations on consciousness constructed from what children know about and are learning about from ongoing events – and consists of spontaneous, naturally occurring activities with objects that engage attention and interest.” Researchers emphasise the importance of play, viewing it as an integral part of early childhood development (Bartlett, 2011; Gray, 2011; Van Niekerk, 2014). The psychologist Winnicott (1971) (as cited in Jeppsen, 2012) stated that no child is able to progress developmentally unless s/he is able to play. Dougherty and Ray (2007) explain that research clearly shows how children, regardless of race or ethnicity, are developmentally more predisposed to play than to using words to express themselves. Child psychologist Landreth

(1993, p. 17) aptly describes the relationship between children and play as follows: “Toys are used by children like words, and play is their language”.

In addition, Hofmeyer and Sweeney (2010), Bartlett (2011) and Gray (2011) consider that the act of playing is essential and developmentally appropriate for children and adolescents, because it stimulates the development and use of their abstract reasoning and language skills (Campbell, 2004; Lifter et al., 2011). Play enables children to distance themselves from their outer worlds and often encourages them to subconsciously role-play and solve their own inner difficulties (Campbell, 2004; Smith, 2012). During play, rapport is strengthened between child and teacher/therapist, and when children trust their teacher/therapist, they are willing and able to learn new things (Campbell, 2004; Smith, 2012). Playing is therefore considered the most appropriate developmental tool to encourage children to learn (Campbell, 2004; Jeppsen, 2012; Lifter et al., 2011).

Ryan (1999) explains that play is a developmental process that evolves systematically from functional (concrete) play into an imaginative and explorative play. A child who is developing typically is expected to progress successively from functional play into imaginative play. Researchers have found that children who are neglected, abused or who have SLDs are prone to struggle with learning and understanding imaginative play (Ryan, 1999). These children therefore need more environmental support to develop the know-how of imaginative play (Ryan, 1999). My study focuses on learners who attend a school for children with a physical disability and/or a SLD. According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (American Psychiatric Association, 2013) and Scanlon (2013), a learner is diagnosed as having an SLD if they have at least a two-year backlog in specific academic learning areas such as reading, spelling, mathematics and writing. Many of these learners have varying difficulties in more than one area of academic learning. Children with SLD who struggle with reading, spelling and/or writing have the tendency to struggle with language learning (Hearing and Speech Agency of Baltimore (HASA), 2014; Scanlon, 2013). Play-centered teaching (such as the STPA) encourages these learners to learn the know-how of language (Smith, 2012).

### **3.3. Potential of kinetics/movement to facilitate language development**

The act of playing involves whole-body movements that are known to increase communicative abilities and improved intelligence quotient (IQ) performance (Craffey, 2009; Luque Agullo, 2001; Paolini, 2011). Children are known to acquire and understand gestures before learning oral language (Luque Agullo, 2001). Kinetic movement stimulates the brain to think and perform beyond basic functioning (Craffey, 2009; Floel, 2012; Paolini, 2011). Furthermore, Nielsen, Zielinski, Ferguson, Lainhart and Anderson (2013) found that electronically induced kinetic stimulation of the brain activates the abstract reasoning and language learning centers of the brain. Oral movements as well as sound and word articulations occurring during verbal tasks also stimulate the left brain to improve language comprehension and provide valuable feedback for language planning and execution (Agullo, 2001, Floel, 2012; Nielsen et al., 2013; Paolini, 2011).

The STPA (Smith, 2012) can be considered a movement-based approach to language intervention. The act of manipulating miniature objects within a sandtray context can be seen as a kinetic experience by which higher level language functions such as narrative skill development may be enhanced (Smith, 2012).

### **3.4. History and development of the Sandtray Play Approach**

The roots of play therapy are firmly planted in the field of psychology (Betman, 2004, 2007; Forsyth, 2011; Jeppsen, 2012; Kalff, 1986; Knoetze, 2013; Smith, 2012; Zhou, 2009). The earliest accounts of play therapy were reported anecdotal events relating to children. For instance, in 1911, psychologist H. G. Wells described how his sons resolved their everyday problems by playing with miniature objects (Hofmeyer & Sweeney, 2011). In 1929, inspired by Wells's observations, child psychiatrist Margaret Lowenfeld assisted troubled children to express their feelings through play. She instructed clients to freely arrange miniature objects within a tray of sand. Her clients called their creations "the world" (Mitchell & Friedman, 1994, p.5), because it reminded them of the creation. As a result, the term "World Technique" was coined (Mitchell & Friedman, 1994, p.5). In the 1950's, Dora Kalff, a Jungian trained psychologist, became interested in Lowenfeld and the World Technique. Jungian training was based on the Tibetan Buddhist belief that symbolic and analytical associations were made



based on which inanimate objects were chosen by the client during assessment. By making the subconscious conscious, healing and enlightenment were believed to occur (Kalff, 1989). The psychotherapeutic act of playing in the sand and organising miniature objects, for the purpose of emotional catharsis, became known as “Sandplay” (Mitchell & Friedman, 1994, p.5). For years to follow, Sandplay was associated with Jungian principles and was purely diagnostic in nature. This approach seldom allowed the client to vocalise or narrate thoughts and feelings pertaining to the Sandworld s/he had created. It was a long-term diagnostic and interpretive approach by which psychologists concentrated on the unconscious of their clients and did not intervene with the client while or after the contents of the sandtray was manipulated (Forsyth, 2011).

Many new ideas arose from the original concept of Sandplay. As a result, a “renaissance” in Sandplay psychology began. Different types of Sandplay approaches evolved. Some researchers started experimenting with its therapeutic potential and applications (Alvarez & Phillips, 1998; Bratton, Ray, Rhine & Jones, 2005). In 2006, a new Sandplay approach was introduced by Kay Bradway who coined the approach “Sandtray”. Unlike Sandplay, Sandtray did not need to take place over a period of months or years to see results. This approach “look(ed) at a process of experiencing in the moment” (Forsyth, 2011, p.35). A Sandtray therapist is “actively involved in facilitating an experience of awareness and growth” (Forsyth, 2011, p.36). Sandtray is a diverse and adaptable approach, where the focus is on the narratives/stories associated with the objects rather than the choice and meaning of objects themselves (Gallerani & Dybicz, 2011).

Currently, Sandtray is considered a post-modern narrative-based play approach (Gallerani & Dybicz, 2011). Most recent studies focus on the post-modern view of play where clients are actively involved during the process of therapeutic decision-making post-diagnosis (Forsyth, 2011; Gallerani & Dybicz, 2011; Jeppsen, 2012; Knoetze, 2013; Lundahl, Bettmann, Hurtado & Goldsmith, 2013; Newman, 2005; Warr-Williams, 2012). This leads to the discussion of the current post-modern Sandtray approach as adapted by Smith (2012), namely the STPA.

### 3.5. What is the Sandtray Play Approach?

Sheila Dorothy Smith is a teacher from Toronto who has worked with learners in both mainstream and special education. Smith was inspired by Bradway's (2006) Sandtray approach. Smith (2012) wanted a solution to her special needs learners' academic and emotional difficulties. She adapted Bradway's approach to suit her learners' classroom needs, introducing the STPA to a group of 12 learners aged 7 years who appeared disengaged in the classroom curriculum. Her book, *Sandtray Play and Storymaking* (Smith, 2012), is a documented account of her first-hand experiences using the STPA. Smith explains that "Sandworld building and storymaking is playful work and serious play" (Smith, 2012, p. 27).

The STPA (Smith, 2012) comprises four phases: building; telling; listening; and writing. This study focused on oral narrative skills, hence only the first three narrative-related stages will be discussed, excluding writing. Phase 1 is the building phase. During this stage, each learner sits independently in front of a sandtray. S/he is given a bag or shoebox filled with miniature objects. In order to encourage silence from the learner partaking in the building phase, the teacher (or therapist) is encouraged to say the following, "The only sound we hear is Mozart" (Smith, 2012, p.40). Research suggests that listening to classical music whilst performing academic tasks enhances information processing and, over time, improves academic performance (Cabanac, Perlovsky, Bonniot-Cabanac & Cabanac, 2013).

Phase 2 is the storytelling phase. During this phase, seeing is replaced by speaking, internal thoughts are communicated outwardly, and a "Sandworld" comes to life through the use of words. The narratives (stories) told about the Sandworld are recorded and transcribed by the teacher to monitor use of vocabulary, language development and narrative progress. The ease of transition from building to storytelling will depend on the learner's learning abilities (Smith, 2012). Often subtle prompting, redirecting and encouragement are necessary to keep the story flowing from beginning to middle to end. It may even be necessary to teach and demonstrate the components of a good story before expecting the child to attempt this narrative format independently (Smith, 2012). Smith (2012) explains that there are three stages of narrative development that are categorised according to the use the storyteller makes of the sandtray. These types are naming (miniature object naming); dramatising (concretely interacting with the miniature objects in the sandtray), and narrating (creating

formal narratives with a beginning, middle and end). Learners with SLDs may take longer than typically developing peers to transition from one narrative type to the next. These learners may need additional verbal cues and structural prompts to help them with this transition (Smith, 2012).

Phase 3 is the listening phase. During the listening phase, the learners take turns listening to each other's narratives. Each listener needs to give two positive comments about the story they have heard and needs to ask one question. This encourages the learners to listen to one another and helps boost the teller's confidence to share narratives with the group (Smith, 2012). Some learners may not know how to listen. In such cases, a workshop may be necessary to teach/refresh listening skills (or what Smith calls "whole-body" listening; see below). Improved listening skills are known to enhance comprehension abilities (Truesdale, 1990). Whole-body listening involves 4 steps:

During Step 1, the difference between hearing and listening is explained to the listener, where hearing is described as the ear acknowledging sounds in the environment, and listening as the active process of interpreting sounds and words in the attempt to derive meaning (Truesdale, 1990).

Step 2 entails teaching the active nature of listening by highlighting the important listening behaviours according to tangible parts of the body. This makes listening a tangible, active and observable skill (Truesdale, 1990). According to Truesdale (1990, p. 183), the learner should be told the following, "When we hear sound, we use our ears. When we try very hard to listen, we need to use more than our ears. We also need to listen with our brain, eyes, mouth, hands and feet."

Step 3 encourages a visual aid in the form of a labelled diagram of the body or pictures arranged in a list of the most important "listening" body parts. This helps to prompt each type of "listening behavior" and also reinforces better understanding of whole-body listening (Truesdale, 1990).

Step 4 involves active demonstrations of appropriate versus inappropriate listening behaviours – for example, showing "listening" with your feet by demonstrating to the learner how the feet need to be together and not moving when someone is talking to you. The teacher

makes the learner aware of how communication partners may perceive them as being rude if they are not following the rules of whole-body listening.

After the listening phase, the learners leave the therapy room and a photo is taken of each Sandworld for later reflections and to encourage work pride. The three phases are continued twice weekly for a minimum of six weeks to bring about academic transformation (Smith, 2012).

### **3.6. Use of Sandtray for different clinical populations**

There is limited research about using Sandtray narratives as a psychological management strategy (Forsyth, 2011). A few post-modern psychology studies have been published in relation to sandplay research. One such study was conducted in the SA context and dealt with the use of Sandtray narratives amongst teachers (where the teachers were the participants) within the context of school development (Newman, 2005). School development may be explained as a process during which the school, as an organisation, constantly and systematically reflects on its own practices and makes the appropriate adjustments and changes (Davidoff & Lazarus, 2002). The aim of the study by Newman (2005) was to determine whether Sandtray therapy provides a safe space for teachers to relate their teaching experiences. The participants in the study were six post-Level 1 teachers who worked in mainstream education. They taught a variety of subjects/learning areas at the school, amongst others Mathematics; History; Afrikaans; Science; English; and Needlework. Data collection took place over four consecutive days. The participants were given a sandtray with miniature objects and were instructed to build a sand story about their experiences at their school. A focus group discussion was then constructed during which the teachers created narratives to explain their sand stories. The researcher (a psychologist) audio recorded the narratives, transcribed them into text and analysed the content of the text thematically. This Sandtray approach was found to be successful in helping the researcher access the underlying personal and structural dynamics that deter the process of development and renewal within a school. This approach also helped the psychologist to understand the individual teachers' perspectives and emotions related to influential events that occurred within their school context (Newman, 2005).

More recent post-modern Sandtray studies were conducted by Forsyth (2011) and Jeppsen (2012). Forsyth's study explored how the use of conversations/narratives in psychology could assist children to improve their self-esteem. The aim of the study was to determine whether or not the effects of Sandtray therapy could have an impact on the development of conversational dimensions. Forsyth (2011) also examined whether Sandtray therapy would lead to a goal-directed outcome for the participant and enable a better understanding of her own life. This study involved a case study of one 13-year old female learner who came from an economically disadvantaged background and who was experiencing emotional as well as learning difficulties. Data collection involved audio-visual recordings of two individual 35-minute interactive Sandtray therapy sessions. Within each session, the participant was asked to organise miniature objects in a sandtray context to portray her life experiences as well as learning and emotional struggles. Thereafter, the participant produced oral narratives to explain her sand stories. Lastly, the researcher (a psychologist) encouraged the participant to reconstruct her sand stories and to create oral narratives that depicted more positive outcomes. In doing so, the researcher empowered the participant to find solutions to her own difficulties. The oral narratives were transcribed into text to serve as a means of reflection. It was concluded that through the use of Sandtray narratives the participant was able to externalise and re-authorise aspects of her life. "A story and language starts to develop, one that has meaning and that encourages further development and correction, significant to the participant's current learning difficulty" (Forsyth, 2011, p. 5).

Jeppsen's (2012) study similarly examined how to overcome trauma from a psychological narrative perspective. The study involved using indigenous/familiar objects within a sandtray context to encourage Haitian children to create oral narratives of their suppressed trauma and to serve as a means of emotional catharsis. Seven child orphans who had experienced the traumatic events of the earthquake in 2010 were participants in the study. On three consecutive days, each participant built three Sandworlds and created oral narratives for each sand story. The sand stories were transcribed into text and compared to determine whether any emotional healing had occurred. Comparisons indicated that Sandtray therapy narratives were an effective therapeutic tool for processing trauma (Jeppsen, 2012).

Because Sandtray play (STP) is also considered a non-verbal means of communication (Zhou, 2009), it has been used for the psychological assessment and treatment of children who struggle to express themselves verbally (Carey, 1990; Jie & Risheng, 2008) as well as

for children who have attention deficits (Pearson, 2003). Observational evidence collected by the headmaster of a South African school for children with SLD revealed that two schools for the deaf in Gauteng use STP to teach basic receptive and oral language skills to their learners: Teachers use miniature objects, in a sandtray context, to help the deaf learners to develop awareness of abstract language concepts such as prepositions. Learners are taught the names of miniature objects to encourage auditory-verbal carry-over skills. This form of teaching was chosen in an attempt to link visual, auditory and object association skills in order to encourage speech and language understanding in deaf learners. Deaf learners were also encouraged to use the miniature objects interactively to strengthen/supplement their verbal communication attempts (personal communication; no traceable studies available on the use of STP by these or other institutions with deaf learners). Another method of STP has, however, been used by a social worker abroad in assisting deaf learners to express their thoughts non-verbally (Betman, 2004, 2007). This form of Sandtray therapy is a “therapeutic approach that crosses language and cultural barriers by moving away from a clinician-driven, verbal response focus to an approach that focuses on visual and tactile responses” (Betman, 2007, p.2). Betman (2004, 2007) used miniature objects within a sandtray context to encourage deaf learners to express their feelings in the sand. For “several months” (Betman, 2004, p. 19), her learners would build Sandworlds and after each building session Betman (2004, 2007) would derive themes and meanings from learners’ biographical context, objects that they chose to use, and the objects’ positioning within the sandtray. She followed the Jungian object meaning and association method which is believed to make sense of the implied, “non-verbal” (Betman, 2007, p. 53) narratives of deaf learners. She would then ask the learners’ parents/guardians to validate her conclusions. Betman (2004, 2007) concludes that, in offering a means of non-verbal communication, STP is a step towards “meeting the mental health needs of deaf children” (Betman, 2007, p. 53).

Smith (2012) describes numerous cases in which learners with special educational needs showed marked academic, social and emotional improvements after being taught using the STPA. According to Smith (2012, p. 154), some mainstream teachers also found the STPA viable “outside its niche as a special education activity”. In these instances, learners who were paired in mixed-ability pairings “were absorbed in the exhilarating activity of imaginative play as their individual strengths were engaged and language skills in story sequencing and organization developed” (Smith, 2012, p. 156).

### **3.7. Use of Sandtray approaches in Speech-Language Therapy**

There does not appear to be any international or local evidence to suggest that a Sandtray approach has been researched or utilised from a speech-language therapy perspective. Smith (2012) indicates that the STPA holds benefits for the work of mainstream and remedial teachers, but does not mention Speech-Language Therapists (SLTs). However, it appears that the general principles of the STPA can be applied to suit the needs of any therapist wanting to teach emergent narrative skills. This study explores whether or not this is the case, i.e. whether there are any significant benefits in using the STPA to teach narrative skills in the field of speech-language therapy.

### **3.8. Criticisms levelled against Sandtray approaches**

Insufficient research exists on Sandtray approaches (Betman, 2007; Forsyth, 2011), and as such the approach cannot be justifiably appraised. The STPA (Smith, 2012) is also a relatively novel teaching approach that has not yet been used in the field of speech-language therapy. Pioneering in the area of narrative development from a speech-language therapy perspective will be necessary in order to appraise the approach for this specific purpose.

### **3.9. Conclusion**

Play is considered the universal language of children (Smith, 2012). Traditionally, Sandplay was used as an observational and diagnostic tool for psychological disorders. Post-modern Sandtray approaches then evolved, in which the therapist used guided narratives to help the client find solutions to his/her problems (Forsyth, 2011; Jeppsen, 2012; Knoetze, 2011; Lundahl et al., 2013; Gallerani & Dybicz, 2011). STP has also been informally used to encourage deaf learners to communicate non-verbally and to learn oral language. Similarly, the STPA (Smith, 2012) has proven successful in improving academic (including language), social and emotional skills in the special education and mainstream classrooms (Betman, 2004, 2007; Smith, 2012). Findings from my study will provide insight into the use of STPA for narrative development in learners with SLDs in the field of speech-language therapy.



## **Chapter 4: Methodology**

### **4.1. Introduction to the research design**

Action research is described as “a form of enquiry that enables practitioners in every job and walk of life to investigate and evaluate their work” (McNiff & Whitehead, 2012, p. 7). The term “action” refers to exploring current practice with the goal to improve it. The term “research” implies the action of “finding things out and coming to new understandings, that is, creating new knowledge” (McNiff & Whitehead, 2012, p.11). By choosing an action research design, the researcher can expect to generate knowledge and initiate further critical discussion about whether or not, and how, improvements/changes have occurred within current practice (McNiff & Whitehead, 2012). This research project can therefore be best described as a form of action research (McNiff & Whitehead, 2012), because the researcher is also the therapist who is interested in changing the practices of her organisation. Circles of planning, action and fact-finding about the result of the action are involved in this research, as the narratives produced by learners in one therapy session are analysed and serve as the basis for decisions regarding the content of the next therapy session.

This chapter commences by describing the research methodology process in terms of participant sampling, data collection, and materials needed for the Sandtray Play Approach (STPA). Data capturing tools/methods, including a description of the implementation process of the Multilingual Assessment Instrument for Narratives in Afrikaans (LITMUS: MAIN-Afrikaans) will be discussed. Finally, an explanation of the data analysis and data interpretation process will follow.

### **4.2. Ethical considerations**

Prior to data collection, I applied for ethical clearance for the study from the Free State Department of Education and the Research Ethics Committee: Humanoria of Stellenbosch University. I also obtained written permission from the headmaster (see Appendix 3), the classroom teacher (see Appendix 4) as well as informed consent from learners (see Appendix 5) and their parents/guardians (see Appendices 6 and 7) to use data generated from the STPA training. The participants were assured that neither their names nor the name of the school



would be used in the report or documentation of the data. Pseudonyms and numbering were used to refer to each participant. Only photos of the participants' Sandworlds were taken; none of the participants' faces were featured on the photos. All audiotape recordings of the STPA narratives are now stored securely in the school's archives and will be kept for 5 years after the study. Only my research supervisor, the school headmaster, and I will have access to the data during these 5 years.

### **4.3. Participants**

For homogeneity purposes and to reduce the possible influence of external variables in the study, learners in one Grade 3 class comprising first language (L1) Afrikaans-speaking learners were identified as potential participants. All learners had been diagnosed by the school psychologist as having a specific learning disability (SLD). Learners with SLD usually need more time to learn the basic concepts of their L1 than do their typically developing peers (Colozzo, Gillam, Wood, Schnell, & Johnston, 2011; American Psychiatric Association, 2013; HASA, 2014; Scanlon, 2013). Grade 3 participants were chosen for the study, because they had at least two full years of exposure to Afrikaans as the medium of learning and teaching at school. Their L1 skills were therefore considered presumably sufficient for the learners to have attempted narrative- and comprehension-related tasks in their L1.

The participants were selected purposefully: first, according to those who were previously diagnosed by their SLTs as having fair or good L1 proficiency and, second, according to their willingness to co-operate and purposefully partake in the STPA sessions. The Grade 3 class in question comprised 10 learners: eight boys and two girls. Boys were chosen for the study because (i) there is a higher incidence of boys than girls who present with language learning disability (HASA, 2014; Scanlon, 2013), (ii) the number of girls in the class was too few to allow for the selection of homogenous participants for an experimental as well as a control group, (iii) I wanted to reduce gender variables, therefore children of the same gender were selected as participants in the study. Six of the eight boys were still attending speech-language therapy at the time of the study; however, their SLTs considered their language skills to be fair and their language delays almost eliminated. The other two boys presented with fairly good language skills. Despite all the boys having fair to good language skill

abilities, the class teacher has indicated that they all had narrative skill difficulties. In order to have an experimental and a control group of equal size, four boys served as members of the experimental group participants (those who received intervention in the form of STPA activities related to narrative development) and four served as control participants for the study (and thus received no intervention from me). I also asked the teachers whether participants come from monolingual or bilingual households in order to see whether or not multiple language learning influences occurred in the learners' narrative development. Only one of the boys spoke both English and Afrikaans at home.

## **4.4. Data collection**

### **4.4.1. Pre-testing using the LITMUS: MAIN-Afrikaans**

The adapted LITMUS: MAIN-Afrikaans (two-dimension sequence cards) (Gagarina et al., 2012) was used to assess the eight participants to determine their baseline scores in terms of narrative and comprehension skills. Each participant was tested individually. According to Gagarina et al. (2012), the 'Baby Birds' and 'Baby Goats' sequence pictures of the LITMUS: MAIN-Afrikaans test the same narrative concepts and were best suited to assessing spontaneous narrative production without repetition. If the participant was assessed with the Baby Birds version during the pre-intervention testing, they were assessed with the Baby Goats version during the post-intervention testing, and vice versa.

The aim of my study was to determine whether or not narratives were influenced by the STPA. Therefore I used the story structure results from the LITMUS: MAIN pre-test to determine who I chose as participants and who as controls for the study. I ranked the boys' results according to their story structure score obtained during pre-testing and then purposefully selected representatives for each group so that the groups would be highly comparable in terms of story structure score. The experimental group members were: a boy who had scored 9 on story structure (participant E4);<sup>2</sup> one who scored 8 (participant E2); one who scored 7 (E3) and one who scored 4 (participant E1). The members of the control group were C1 (score 9); C2 (score 9); C3 (score 6); and C4 (score 4).

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<sup>2</sup> For the sake of anonymity and for easy reference to participants, the experimental group's members are referred to as E1, E2, E3, and E4 and the control group's as C1, C2, C3, and C4.

#### **4.4.2. The Sandtray Play Approach**

Due to the positive accounts of play therapy for children with SLD (Gray, 2011; Campbell, 2004; Lifter et al., 2011; Ryan, 1999; Smith, 2012), I chose a play-centered approach to explore narrative skill development for learners with SLD, specifically the STPA.

##### **4.4.2.1. Scheduling of the sessions**

In total, there were 20 sessions. Only the four participants in the experimental group received STPA sessions from me, up to four times a week. This was to make up for lost time due to public and school holidays that fell during my data collection period. The participants received intervention in the form of (i) mini sessions (when necessary, to train a task requirement, e.g. listening and storytelling skills) and (ii) 45-minute sessions where all the learners who were available at the time were encouraged to attend. Each story produced by each participant was audio recorded and at the end of the session a photo was taken of each completed Sandworld. I took photographs to motivate the experimental group participants to do their best and take pride in their Sandworld creations. The STPA (Smith, 2012) also stipulates that photos should be taken after each Sandworld has been built to show appreciation and evoke a sense of accomplishment and respect for the participants' creations. The days and periods during which intervention took place were chosen according to the class teacher's willingness and ability to allow her learners to leave the class within school hours. The above-mentioned process occurred weekly for a minimum of six weeks (as suggested by Smith, 2012). Originally I had arranged with the teacher to take the participants during the 3<sup>rd</sup> and 4<sup>th</sup> periods on Tuesdays, Wednesdays and Fridays, however, the teacher kindly allowed me access to the participants whenever I needed them and I then sometimes also saw the participants on Mondays and Thursdays.

##### **4.4.2.2. Materials needed for the Sandtray Play Approach**

The following materials were used during a STPA therapy session (based on Smith, 2012, p. 54-55; see Figure 1):

- Plastic sandtrays of approximately 58cm by 15cm. This size is considered large enough for the child to interact within. Each sandtray needs a fitting lid to keep the sand from drying out and for easier storage.

- Sand to fill the tray and to be used as an unfixed medium in which play may freely occur. According to Smith (2012), it is optional to use different textures of sand. I used one texture only.
- Large, blue glass beads to create the illusion of water. Water can be used to create tunnels and pools within the sand, however, this is optional as it could get messy.
- Miniature objects. Unlike in psychology, there is no symbolism linked to the objects. A variety of objects is suggested, merely to encourage creativity and the potential for intriguing stories. Smith (2012) suggests the following object categories to include in the sandtray collections: people; buildings; animals; fantasy and mythological figures; vehicles; natural objects (items found in nature, such as pebbles and twigs); and building materials. These guidelines were borne in mind when selecting objects for this study.
- Storage for the miniature objects, such as a large shoebox or a plastic locking bag. I used one shoebox per child and filled it with miniature objects. In each box, there was a selection of items from every above-mentioned category. Children are not allowed to exchange objects with each other.



*Figure 1: A sandtray, a shoebox filled with miniature objects, and a bee “talking stick”*

#### 4.4.2.3. Implementing the Sandtray Play Approach

Only the experimental group of boys attended the STPA mini-sessions that were held prior to Sandworld building. Due to absenteeism, school holidays and the participants expressing a strong preference to all attend therapy together, the STPA participant groups ranged from two to four participants at given times.<sup>3</sup> Afrikaans was the medium of instruction throughout the study. The participants were taught how to build Sandworlds; develop listening skills; and tell a story (making reference to characters, the plot, events, and resolutions). These were demonstrated to the experimental group by me prior to the STPA sessions, and narrative prompting was implemented, where necessary, during narrative telling. Additionally, I made posters to cue the need for a story to have a beginning, middle and end (see Figure 2) and made a chart to remind the participants of good listening skills.



*Figure 2: Posters to cue beginning, middle and end and listening skills*

<sup>3</sup> Towards the middle of the STPA intervention period, three participants started to become aggressive towards the other participant. In order to address this, I focused on the listening skill of respecting each other's opinions and only praised exchanges of kind words. I also started making use of groups of four participants because no participant wanted to be alone in a group of two with this specific participant. I furthermore told stories where the main characters were nasty to each other and in the end all became friends. The sarcasm and bullying increased to such an extent that I had to take the three participants aside and explained to them how they were making their and my Sandtray intervention experience unpleasant because of their bickering and snide remarks. The direct confrontation seemed to effectively manage the behaviour problems, but the group sizes remained at least three if the other boy was in the group.



Each experimental group member received their own sandtray with a box of semi-structured theme items. I also had my own sandtray and box of items for prior demonstration of task requirements for each stage in the approach. Smith (2012) does not stipulate how many items should be in the box, merely that there need to be enough objects to stimulate the learner's creativity (see section 4.4.2.4).

Each experimental group member built a Sandworld independently (see Figures 3 and 4 for examples of completed Sandworlds) and in "silence", with only Mozart's music playing in the background (as required by the STPA; see Smith, 2012). Classical music is suggested for this approach to stimulate enhanced brain functioning (Cabanac et al., 2013). The duration of each period on the school timetable was approximately 20 minutes. A bell rang between each period. Originally I planned to wave a flashcard, with a number 1 on, as a reminder to the participants that 1 minute remained before they needed to be finished with their building. This was, however, not necessary as all participants were finished building before 20 minutes were over. By the ringing of the first bell, the Sandworlds were thus created.



*Figure 3: Example 1 of a Sandworld built by participant E3 story number 5*



*Figure 4: Example 2 of a Sandworld built by participant E2 story number 13*

Encouragement was, however, needed to finish telling their stories. I also made a child-friendly “talking stick”. Only the participant with the talking stick in his hand was allowed to talk. Each participant had at least 5 minutes in which to tell the story based on his Sandworld. I used an egg timer to remind the participants to reach the end of their stories. Initially the participants objected to being interrupted by a “boring looking” egg timer. Towards the end of the study, I obtained a new egg timer in the shape of a little boy. The participants were interested in the little boy timer and were keen to use it during the STPA intervention sessions. They individually set the timer before commencing with their narration and duly ended off when the egg timer rang.

Each experimental group participant was given a turn to tell his story and the others present needed to listen to the narration. Each listener needed to give a positive comment and ask one question to ensure that they listened to the stories of other group members. I also made comments and asked a question about the narrative at the end. My comments always referred to the creativity of the storyline, whether or not the participant had included a beginning, middle and end and what I found good about the use of characters in the story. My question contained an internal state term to encourage the participants to understand and use internal state-related comments and/or questions during the STPA sessions. This process of storytelling, commenting and question asking and answering took a maximum of 20 minutes. For example, when the group was small (2 participants), each participant had a leeway of approximately 5-10 minutes to tell their story (20 minutes for the combined time of both

learners). When three or all four participants were in the group, each had approximately 5 minutes to tell their story (20 minutes in total for all three/four participants).

The transcript below (Excerpt 1) is an example of a STPA narrative and how comments and questioning occurred thereafter. (Transition points are indicated in bold type-face.) Here I chose a narrative produced towards the end of the therapy program as, by then, the participants were well accustomed to the process.

***Excerpt 1: A narrative followed by comments and questions and answers (E3:18)<sup>4</sup>***

- E3: Lank, lank gelede was daar ‘n koning en sy jagter.  
*Once upon a time there was a king and his hunter.*  
 Die koning het vir die jagter gestuur om diere te jag.  
*The king sent the hunter to hunt animals.*  
 En toe sê die perdjie daar was kos in die paleis.  
*And then the little horse said there was food in the palace.*  
 En toe...  
*And then...*
- T:<sup>5</sup> Waar is die perdjie?  
*Where is the little horse?*
- E3: Ag... die varkie.  
*I mean...the little pig.*  
 En toe gaan die wolf.  
*And then the wolf went.*  
 En toe sien hy daar was ‘n hek.  
*And then he saw there was a gate.*  
 En toe vat hy maar die apie.  
*And then he just took the little monkey.*  
 En toe gooi hy hom teen die hek.  
*And then he threw him against the gate.*
- T: Sjoel!  
*Wow!*
- E3: En toe was hy vol steke!<sup>6</sup>  
*And then he was full of spikes!*  
 En toe hol die apie weg want hy het ‘n jagter gesien.  
*And then the little monkey dashed away because he had seen a hunter.*  
 Toe sê die apie: “Hol weg!” maar hy het nie so goed gehoor nie.  
*Then the little monkey said, “Scadaddle!” but he did not hear so well.*

<sup>4</sup> I indicate from which narrative the excerpt forms part by indicating the participant who produced it (E3 in this case) and the number of the narrative (successively numbered from the beginning of the study) produced by the particular participant (narrative number 18 in this case). For each excerpt, the English translation of the Afrikaans is provided in italics, and neologisms of novel uses of existing words are underlined.

<sup>5</sup> T = Therapist (i.e., the researcher)

<sup>6</sup> Note that I do not comment on semantically odd Afrikaans words nor on English words used in the participants’ narratives.



En toe...  
*And then...*  
 Kom die wolf naby hier.  
*The wolf came near here.*  
 En toe skiet die jagter hom in die poot.  
*And then the hunter shot him in the paw.*  
 En toe hol hy klein bietjie vêr weg.  
*Then he dashed a little way away.*  
 Toe skiet hy hom in die boude in...  
*Then he shot him in the bum...*  
 En toe skiet hy hom vir die laaste keer...  
*And then he shot him for the last time...*  
 En toe skiet hy hom reg deur die oor.  
*And then he shot him right through the ear.*

T: Oor?  
*Ear?*

E1: Oë?  
*Eye?*

E3: Oor!  
*Ear!*  
 En toe sê hy vir die varkie: “Hoekom het die jagter op my stert gespoeg?”  
*And then he said to the little pig, “Why did the hunter spit on my tail?”*  
 “En hoekom het hy my gebyt op die boude?”  
*“And why did he bite me on the bum?”*

*[Everyone laughs]*

E2: Geskiet!  
*Shot!*

E3: Wag!  
*Wait!*  
 En toe vra hy: “Hoekom het die jagter my weer gespoeg op die ore?”  
*And then he asked, “Why did the hunter spit on my ears again?”*  
 En toe sê die varkie: “Hy het jou nie gespoeg! Hy het jou geskiet!”  
*And then the little pig said, “He did not spit at you! He shot you!”*  
 En toe lag die varkie so erg.  
*And then the little pig laughed so much.*  
 En toe hoor die jagter.  
*And then the hunter heard.*  
 En toe kom hy.  
*And then he came.*  
 En toe skiet hy vir die varkie dood.  
*And then he shot dead the little pig.*  
 En toe gaan ‘n groot slang rondom hom.  
*And then a big snake curled around him.*

T: Om die jagter?  
*Around the hunter?*

E3: Ja.  
*Yes.*  
 En toe maak hy hom dood!  
*And then he killed him!*

T: Toe maak die jagter die slang dood...  
*Then the hunter killed the snake...*

E3: En toe gaan hy na die koning toe.  
*And then he went to the king.*  
 En toe...  
*And then...*

- En toe vat die koning sy byl.  
*And then the king took his axe.*  
 En toe kap hy sy tong af!  
*And then he chopped his tongue off!*
- T: Sjoe!  
 Wow!
- E3: En toe gaan die slang.  
*And then the snake went.*  
 Toe vra hy vir die jakkals: “Hoekom het die koning my op my tong getrap?”  
*Then he asked the fox, “Why did the king step on my tongue?”*  
 En toe lag die wolf baie erg.  
*And then the wolf laughed much.*  
 En toe val hy onderstebo.  
*And then he fell over.*  
 En toe gaan hy in sinkingsand...  
*And then he went into sinking sand.*
- T: Dryfsand...  
*Quick sand...*
- E3: Die einde.  
*The end.*
- T: Nou gaan ons elkeen sê waarvan ons gehou het van die storie.**  
*Now we are each going to say what we liked about the story.*
- E2: Ek het van die slang gehou daar waar die koning op sy tong getrap het toe kap hy eintlik sy tong af met ‘n byl!  
*I liked it where the snake thought the king had stepped on his tongue but meanwhile he had chopped his tongue off with an axe.*
- E1: Ek hou daarvan waar die jagter die wolf geskiet het toe dink hy die jagter het op hom gespoeg.  
*I like it where the hunter shot the wolf and he thought the hunter has spat on him.*
- E4: Ek hou van die apie wat die hek oopgebreek het.  
*I like the little monkey that broke open the gate.*
- [Timer goes off]
- E1: Dink aan jou einde...  
*Think about your ending...*
- T: Ek dink jy het ‘n baie goeie storielyn gehad.  
*I think you had a very good storyline.*  
 Jy het ‘n begin, middel en einde gehad.  
*You had a beginning, a middle and an ending.*  
 Hierdie karakters in jou storie het diep gedagtes gehad.  
*These characters in your story had deep thoughts.*  
 Hulle het hulle verbeel dat sekere goed gebeur maar eintlik het iets heeltemal anders met hulle gebeur.  
*They imagined that certain things were happening to them when actually something completely different had happened to them.*
- T: Nou is dit tyd vir ons elkeen om ‘n vragie te vra oor die storie.**  
*Now it is time for us each to ask a question about the story.*
- E2: Hoekom het die wolf die apie teen die hek gegooi, E3?  
*Why did the fox throw the little monkey against the gate, E3?*
- E3: Die varkie het vir hom gesê daar is kos by die paleis en toe sien hy daar was ‘n hek.  
*The little pig had told him that there is food by the palace and then he saw there was a gate.*  
 En toe besluit hy moet die apie gebruik as ‘n hamer.  
*And then he decided he had to use the little monkey as a hammer.*  
 En toe gooi hy die hamer teen die hek.  
*And then he threw the hammer against the gate.*

- E2: Ag shame!  
*Ah shame!*
- E1: Ahhhh!  
*Ahhhh!*
- E4: Ek wil weet hoekom het E3 nie die skatkis gebruik nie en hoe het die apie gevoel toe hy hom gegooi het teen die hek?  
*I want to know why E3 did not use the treasure chest and how did the little monkey feel when he threw him against the gate?*
- T: Goeie vrae.  
*Good questions.*
- E3: Ek het vergeet van die skatkis.  
*I forgot about the treasure chest.*
- T: En die tweede vraag, hoe het die apie gevoel?  
*And the second question, how did the little monkey feel?*
- E3: Hartseer, want hy was gegooi teen 'n ysterhek met steke!  
*Sad, because he was thrown against an iron gate with spikes!*
- T: Die doringdraad het hom seergemaak, né?  
*The barbed wire hurt him, hey?*
- E3: Ja.  
*Yes.*
- E1: Hoekom het die koning die slang se tong afgekap?  
*Why did the king chop off the snake's tongue?"*
- E3: Sodat hy hom nie kan pik met gif!  
*So that he could not bite him with poison!*
- T: Hoe het die varkie gevoel toe die jagter hom geskiet het?  
*How did the little pig feel when the hunter shot him?*
- E3: Baie hartseer... want hy gaan doodgaan!?  
*Very sad...because he was going to die!?*
- T: Goeie storie en antwoorde, E3!  
*Good story and answers, E3!*

#### 4.4.2.4. Adaptations made to the STPA (Smith, 2012)

I made field notes during each STPA intervention session that I consulted after every session in order to prepare for the subsequent session. These field notes assisted me in seeing what had to be changed and what was working well. For each concern that arose throughout the sessions, I tried to adapt the next session to address the problem. These adaptations are not listed in the STPA guidelines, and as such I discuss them here, because they constitute adaptation of the STPA and could therefore have influenced my obtained results.

Upon listening to the participants' baseline stories, without providing any introductory STPA intervention, it became clear that the stories were very short (mostly one, incomplete episode) and that the participants were hesitant to explore the items in their sandtrays. They also did not include a clear beginning, middle and end to their stories. I further noticed that the participants struggled to produce a continuous storyline and made long pauses before continuing with their story. The following extract illustrates some of these observations. In

this Sandworld, the participant used two Native American figurines, a horse and a wigwam. The participant appeared to lack confidence in his storytelling abilities, the story did not have a beginning or end, and the story was short with an incomplete storyline.

***Excerpt 2: Pre-intervention narrative (E1:1)***

E1: Die mense is besig om die diere dood te skiet.  
*The humans are busy shooting the animals to death.*

[Silence]

T: Ok... ja?  
*Ok...yes?*

[Silence]

E1: En hulle het 'n pot vol goud.  
*And they have a pot full of gold.*

T: Ok, hulle het 'n pot vol goud...?  
*Ok, they have a pot full of gold...?*

[Silence]

E1: Dit is al...  
*That is all...*

T: Ok...  
*Ok...*

Initially, I put only a few items in their shoeboxes to avoid the experimental group participants from becoming overwhelmed with item choices. This, however, appeared to limit their creativity and dampened their eagerness to tell comprehensive stories. In order to encourage multiple episodes, I introduced glow in the dark toys, after which the participants successfully created numerous day and night episodes. I also included more (and more ferocious) items, such as dinosaurs, skeletons, snakes and aliens.<sup>7</sup>

In our first mini session, I built a Sandworld and verbally demonstrated a story. I used posters to highlight that a story has a beginning, middle, and an end. Thereafter, I described what made a good beginning, middle, and end, and I encouraged the participants to use as many items as possible and emphasised how stories can be imaginative. I also asked the participants to express themselves without fear of saying something wrong. This encouraged

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<sup>7</sup> In session 16, three of the most popular items went missing. In order to address this, I explained to the participants that my toys sometimes liked to jump into children's pockets and suitcases and go home with them. I named the missing toys and said that should they find these naughty toys in their pockets, in their bags or at their homes, they were to bring them back because the missing toys' friends and I missed them. I also told the participants that we would not be able to tell stories the next day if these toys had not returned to be the characters in our sandtrays. This technique managed to convince participants to return the toys to the therapy room. This anecdote serves to illustrate that the participants enjoyed the objects provided to them for Sandworld building.

them to such an extent that their narratives became increasingly longer. After the fourth session, it was clear that the participants were giving too much detail, were not focusing on their stories as a whole and were focusing on individual characters instead of incorporating all the scenery they had included in their sandtray. The longer and less focused the stories were, the worse the grammar and cohesion appeared to become. Despite appearing to struggle to express their thoughts clearly, the participants did not want to end their stories. They also made inappropriate use of deictic expressions and assumed their listeners knew who “the thing”, “he” and “they” referred to without the referent being made clear to the listeners. This made listening to the story challenging, and the non-narrating participants quickly lost interest in the narrator’s story; they appeared to lose concentration. These long narratives also became problematic because a time limit was essential in order to record all the participants’ narratives within my allocated sessions. The participants also at this point struggled to take turns, and spoke without listening to each other. In order to promote turn-taking, I introduced the talking stick in our second mini session. In this session, I focused on whole body listening skills. Along with the talking stick (which the participants were excited to use), I prepared a poster to cue good listening skills. The excerpt below shows how the poster was used and how the talking stick was introduced to participant E1 when it was his turn to tell the story based on his Sandworld.

***Excerpt 3: Introducing the talking stick in order to promote orderly turn-taking (E1:16)***

- T: E1, jy het die praatstok want jy gaan nou jou storie vertel.  
*E1, you have the talking stick because you are now going to tell your story.*  
 E4, E2, en E3, julle drie moet luister en niemand behalwe E1 mag nou praat nie.  
*E4, E2 en E3, you three must now listen and no one except for E1 is allowed to speak now.*  
 Voordat E1 begin, kom ons kyk weer of ons reg is om te luister.  
*Before E1 starts his story, let us have a quick look at our poster to see whether or not we are ready to listen.*  
*[Everyone looks at the components on the listening chart.]*  
 T: Ok, almal is nou reg om te luister.  
*Ok, everyone is now ready to listen.*  
 E1, jy kan maar jou storie begin.  
*E1, you can now start telling your story.*  
 E1: Lank, lank gelede was daar ‘n slang...  
*Once upon a time there was a snake...*

In order to reduce incoherence and rambling, I encouraged the participants to be more selective of their main characters. I told the participants that if an item was included in the Sandworld, it had to be mentioned within the story. I continuously emphasised the importance of creating a beginning, middle and end to the story. I mentioned that a long story

was not necessarily a good story (see Excerpt 4). I suggested the use of a timer to limit the length of their stories, but the participants said they were not ready to tell shorter stories. I did use an egg timer once, but the participants became disheartened when it buzzed. (They did not like the appearance of the white egg timer and said the timing was faulty. As stated in section 4.4.2.3, a more attractive timer was introduced later, but by then the participants had succeeded in adjusting their story length to the time allocated to them.) I also encouraged the participants to focus on the structure and quality of their stories. Excerpt 5 indicates how I reminded them of the parts of a story.

***Excerpt 4: Encouraging participants to tell shorter stories***

- T: E4, onthou net, 'n storie wat 'n bietjie korter is kan ook kragtig wees.  
*E4, just remember, a story that is a bit shorter can also be a good story.*
- E4: Maar hoekom?  
*But why?*
- T: Want as iemand se storie te lank is, dan kan dié wat luister nie alles inneem nie en hulle begin sukkel om te luister na jou storie.  
*Because if someone's story is too long then those who are listening to the story can't take everything in and they struggle to listen to your story.*

***Excerpt 5: Encouraging participants to tell well-structured stories***

- T: Vandag gaan ons weer stories vertel, maar vandag wil ek hê julle moet mooi dink voordat julle begin.  
*Today we are going to tell stories again, but today I want you to think a little before you start telling the story.*
- Wat het 'n storie nodig?  
*What does a story need?*
- E2: 'n Begin, 'n middel en 'n einde.  
A beginning, a middle and an end.
- T: Ja!  
*Yes!*
- Goed, so julle gaan vir my 'n storie moet gee met 'n begin soos... "Lank, lank gelede" of "Eendag".  
*So, you are going to have to tell me a story with a beginning such as... "Once upon a time" or "One day".*
- En waar die storie gebeur, soos op 'n plaas of in die woestyn...  
*And where the story is happening, like on a farm or in the desert...*
- Wat is hoofkarakters?  
*What are main characters?*
- E4: Dit is die persoon wat die storie geskryf het.  
*It is the person who wrote the story.*
- T: Die hoofkarakters is eintlik dié wat die belangrikste is in die storie, oor wie die storie gaan.  
*The main characters are actually those who are the most important in the story, around whom the story is centered.*
- E2: Hy, die Smurf, gaan my hoofkarakter wees.  
*He, the Smurf, is going to be my main character.*
- T: Mooi so!

*Good!*

Dan gaan julle stuk vir stuk vertel wat die hoofkarakters doen; dit gebeur in die middel van jou storie.

*Then you are going to say bit for bit what the main characters are doing; this happens in the middle of your story.*

Tot op die punt waar die storie eindig.

*Till the point where the story ends.*

For the most part, I allowed participants to tell their stories uninterrupted. At times, it was necessary, for various reasons, to interrupt the narrator. These reasons included the following:

- (i) to ask for clarification, as could be seen in Excerpt 1 where I was not sure whether the narrator said *oor* 'ear' or *oog* 'eye'. I also at times asked participants to be more specific about referring to characters (see Excerpt 6).

***Excerpt 6: Encouraging a participant to make clear reference to characters (E2:15)***

E2: ...Toe gaan hy so.

*...Then he went like this.*

Toe gaan die perdjie dood.

*Then the little horse died.*

Toe gooi hy die bullet terug...

*Then he threw the bullet back...*

T: Toe gooi hy die koeël terug...

*Then he threw the bullet back...*

Is "hy" die koning?

*Is "he" the king?*

E2: Ja.

*Yes.*

T: Jy moet dan vir ons sê hy is die koning, anders gaan ons nie weet van wie jy praat nie.

*You must then tell us that he is the king, otherwise we are not going to know who you are talking about.*

- (ii) to make short comments to the narrators to remind them of the parts of a story.
- (iii) to encourage them to extend certain parts of their stories. In Excerpt 7, I encouraged a participant to extend the middle of his second story.

***Excerpt 7: Encouraging a participant to extend the middle of his narrative (E1:2)***

T: Vertel nog so bietjie in die middel van jou storie; onthou die middel van 'n storie is waar alles gebeur.

*Tell a little bit more in the middle of your story; remember the middle of the story is where all the action takes place.*

E1: Kan hulle fight?

*Can they fight?*

T: Ja, hulle mag baklei. Daar is geen reg of verkeerd wanneer jy 'n storie vertel nie.

*Yes, they are allowed to fight. There is no right or wrong when you are telling a story.*

- (iv) to indicate to narrators that they had to start ending off their stories. In Excerpt 8, I cued a participant to start thinking about a suitable ending to his story (see part in bold type-face). This excerpt is from a rather disjointed but very enthusiastically produced narrative, the ninth narrative produced by participant E2. His story included a battle between a king, a witch, and a dragon. He clearly enjoyed narrating the fight and was not eager to focus on an ending to his story. In this case, my cuing the participants to end his story was unsuccessful; in other cases, such cuing was indeed successful.

***Excerpt 8: Cuing a participant to end his narrative (E2:9)***

- E2: ...Maar toe kom daar so 'n heks toe voor hom.  
*...Then a witch came in front of him.*  
 Toe ry hy die heks stukkend.  
*Then he rode the witch to pieces.*  
 Toe stamp hy hom.  
*Then he bashed him.*  
 Toe gaan ry hy oor hulle altwee.  
*Then he rode over both of them.*  
 En toe kom die draak weer op.  
*And then the dragon stood up again.*  
 Toe steek die geweer per ongeluk binne die draak in - DUHM!  
*Then the gun accidentally stuck inside the dragon - DUHM!*  
 Toe spin sy quad bike, ry hy met 'n vol spoed na hom toe.  
*Then his quad bike spun, rode at full speed towards him.*  
 Vat die geweer so, né.  
*Took the gun like this, hey.*  
 So toe slat sy wiel sy poot, né.  
*So his wheel hit his paw, hey.*  
 So toe gaan hy so.  
*Then he went like this.*  
**T: E2, begin 'n bietjie dink aan jou einde, né!**  
**E2, start thinking of your end, ok!**  
 E2: Hmm...  
*Hmm...*  
 En toe was die draak nog nie dood nie.  
*And then the dragon was still not dead.*  
 Maar toe skiet hy.  
*But then he shot.*  
 En toe val die quad bike op hom...  
*And then the quad bike fell on him...*

- (v) to encourage participants to continue with their narration. Excerpt 9 illustrates how I encourage E1 to break the silences that there were during his storytelling. (In doing so, I apparently incidentally taught him and the other participants how to use the conjunctive adverb *toe* 'then' in a narrative.)



***Excerpt 9: Discouraging long silences (E1:9)***

- E1: Kom daar sulke laser aan.  
*This laser came along a laser.*  
 Skiet hy die dinosaur.  
*He shot the dinosaur.*  
 Maak hulle mekaar dood.  
*They killed each other.*  
 [Silence]  
 T: Toe?  
*Then?*  
 [Silence]  
 T: E1, dink nou aan iets opwindends wat gebeur met die karakters wat oorbly.  
*E1, now think about something exciting that can happen to the characters that are left over.*  
 [Silence]  
 T: En toe?  
*And then?*  
 E1: Toe kom die dinosaur.  
*Then the dinosaur came.*  
 Toe eet hy die blare.  
*Then he ate the leaves.*  
 Toe sien die padda nie vir die dinosaur nie.  
*Then the frog did not see the dinosaur.*  
 Toe kom vang die dinosaur vir hom.  
*Then the dinosaur came to catch him,*  
 Toe is hy dood.  
*Then he was dead.*

- (vi) to model appropriate vocabulary. Despite all learners being diagnosed with fair to good language skills by their SLTs, the participants did not always have the correct vocabulary and grammar structures to express themselves clearly. The linguistic demands of creating narratives appeared to challenge their linguistic abilities. Because I did not want to break the flow of the stories as well as the participants' confidence, I chose to focus on incorrect or Anglicized Afrikaans words only, as far as possible. I did this by recasting their utterances or modeling correct vocabulary use. Vocabulary teaching was not the aim of my intervention study. However, it was hoped that Afrikaans vocabulary learning would occur and that participants would start to make clearer reference to who/what they were talking about, in order to make the participants' stories easier for the listeners to follow. In Excerpt 10, I model the correct Afrikaans word for the English word *trap*, and in Excerpt 11, I encourage a participant to self-correct his vocabulary. In Excerpt 12, I introduce a previously unknown vocabulary item to a participant.

***Excerpt 10: Modeling the Afrikaans equivalent of an English term used by a participant (E2:12)***

- E2: En die robot en die beer het 'n trap gemaak.  
*And the robot and the bear made a trap.*  
 Toe trap hulle in die trap.  
*Then they stood in the trap.*  
 T: In die lokval, ja...  
*In the trap, yes...*

***Excerpt 11: Encouraging the use of specific lexical items by a participant (E4:16)***

- E4: Toe kry sy 'n baba perdjie daar binne!  
*Then she found a baby horse inside!*  
 T: En wat is 'n baba perdjie in Afrikaans?  
*What is a baby horse in Afrikaans?*  
 E4: 'n Vulletjie  
*A foal.*  
 T: Mooi so, E4!  
*Great, E4!*

***Excerpt 12: Providing a participant with unknown vocabulary item (E3:15)***

- E3: ...En toe het hy nie geweet die storm was nog nie klaar nie.  
*...And then he did not know that the storm was not finished yet.*  
 En toe kap dit hom reg in die kop...  
*And then it hit him right on the head...*  
 T: Die hael...  
*The hail...*

#### **4.4.3. Post-testing using the LITMUS: MAIN-Afrikaans**

The LITMUS: MAIN-Afrikaans (2D sequencing cards) (Gagarina et al., 2012) were used to re-assess all 8 boys in the class to determine their final scores in terms of narrative and comprehension skills. Should the participant have been pre-tested using the “Baby Bird” sequence cards, the post-test was the “Baby Goat” sequence test and vice versa. This ensured that the learner was not merely narrating a story that he remembered from the pre-testing.

#### **4.4.4. Data collection tools and recording methods**

##### **4.4.4.1. Pre- and post-testing with the LITMUS: MAIN-Afrikaans**

As stated above, the LITMUS: MAIN-Afrikaans story sequence cards were used as the pre- and post-intervention assessment tool (see section 2.4.1 for details on what this instrument assesses). Narratives generated from these sequence cards were audio recorded.

#### **4.4.4.2. Narratives generated from the Sandtray Play Approach**

I audio recorded the STPA narratives and then transcribed the audio recordings verbatim into Afrikaans written text. Thereafter, I translated the utterances into grammatically correct English text. I also used a digital camera to take photos of each completed Sandworld.

### **4.5. Data analysis**

#### **4.5.1. Pre- and post-test data**

The pre- and post-test audio recordings were quantitatively analysed according to LITMUS: MAIN-Afrikaans Recording Form criteria. The recording form has two sections: section 1 which is Production and section 2 which is Comprehension. Section 1 comprises three subsections: A, B and C. Subsection A is for story structure analysis (score out of 17), subsection B for structural complexity analysis (information combined from Subsection A), and subsection C for internal state analysis (score out of 10). Section 2 comprises 10 questions to assess comprehension (score out of 10). Currently there is no normative data available for the LITMUS: MAIN-Afrikaans; however, obtained scores were used comparatively for each individual by performing pre- and post-testing (see. Gagarina et al., 2012).

After calculating the scores for sections 1 and 2, I further analysed and compared the structural complexity of the pre- and post-test narratives of the experimental group and the control group by calculating the number of words and utterances and then the MLUw (following Oosthuizen and Southwood, 2009). Grammatical morphemes were not considered in the calculation of MLU as these are often the focus of speech-language therapy intervention. Two of the experimental group's participants (E2 and E4) and all four participants in the control group were receiving speech-language therapy throughout the course of the study. It would therefore not be clear whether any increase in MLU measured in morphemes from pre- to post-intervention would be due to the conventional speech-language therapy or due to the STPA intervention. Additionally, Oosthuizen and Southwood (2009) conducted a study on using words versus morphemes for calculating the mean length of utterance and found that there was not much difference in the scores. Hence using MLUw or the MLUm (where morphemes are used) would provide very similar results.

I further assessed the structural complexity of each of the experimental and control group members' pre- and post-test narratives by determining whether or not the narratives contained conjunctive adverbs; subordinating and co-ordinating conjunctions; relative clauses; and other embedded clauses.

#### **4.5.2. Narratives generated from the Sandtray Play Approach**

I analysed the experimental group members' STPA narratives by calculating the MLUw. As was the case for the pre- and post-test narratives, I assessed the structural complexity of three of each of the participants' narratives by tallying the number of conjunctive adverbs; subordinating and co-ordinating conjunctions; relative clauses; and other embedded clauses. Thereafter, internal state terms were tallied in each of the selected STPA narratives.

Initially I planned to analyse the narratives qualitatively in terms of the learner's storytelling style. According to Smith (2012), these are narrative developmental stages, namely the naming stage, the dramatization stage and the (indescriptly named) final narrative stage. I would then have established which stage each Sandworld narrative was indicative of. When looking at the participants' baseline narratives, however, I found that they were all already at a formal narrative stage, even though the participants sometimes used dramatisation to add value to their narrative. Because all the baseline narratives produced by the participants were already at the formal narrative stage, I did not need to track progress throughout the STPA intervention sessions.

### **4.6. Data Interpretation**

#### **4.6.1. LITMUS: MAIN-Afrikaans**

The quantitative interpretation of the pre-and post-test narratives included macrostructure analysis involving (i) story structure elements (goal, attempt and outcome); (ii) structural complexity, related to story structure elements; (iii) internal state terms; and (iv) comprehension (or understanding of the story), as specified on the scoring sheet for the LITMUS: MAIN-Afrikaans protocol. The number of words and utterances, and MLUw

scores for the experimental and control group participants' were also tabulated, averaged and compared quantitatively.

Similarly, the results from the structural complexity analysis of each of the experimental and control group members' pre- and post-test narratives were tabulated and compared under the headings: conjunctive adverbs, subordinating and co-ordinating conjunctions, relative clauses, and other embedded clauses.

Interpretations were made based on the comparison of average scores obtained for the experimental and control group participants. These interpretations were based on discussions about possible influencing factors such as performance anxiety and the experimental group members' familiarity with the test administrator that could have influenced their post-test results favourably.

#### **4.6.2. STPA narratives**

The three narratives of each participant were compared in terms of microstructure (such as MLUw); number of conjunctive adverbs, subordinating and co-ordinating conjunctions, relative and other embedded clauses; and number of internal state terms. Intra-participant comparisons were thus made. The internal state terms were further listed and classified according to type; interpretations were made according to discussions about concepts taught during the STPA intervention sessions; and according to adaptations made in the STPA methodology during the STPA intervention sessions that could have influenced the findings.

#### **4.7. Data validation**

For increased validation of the study, interpretations were drawn both quantitatively and qualitatively (see McNiff & Whitehead, 2012; Mouton, 2003). In order to ensure accuracy of the transcriptions and scoring, the following were transcribed by and scored independently by a Speech-Language Therapist (SLT) experienced in working with children with SLD:

- (i) The LITMUS: MAIN-Afrikaans narratives of a member of the experimental group (randomly selected by the second transcriber and scorer), and

- (ii) The first STPA narrative produced by each of the four participants in the experimental group.

The inter-transcriber reliability was 96.3% and the inter-rater scoring reliability was 97.5%.

At the end of the data collection period, the second transcriber and rater also looked at all the transcribed STPA narratives of one of the members of the experimental group (again randomly selected by the second transcriber and scorer) in order to ensure that the qualitative analysis in terms of stage of narrative development was accurate. Any differences between me and the second transcriber and rater were resolved through discussion until an agreement was reached. This SLT was also consulted whenever I was uncertain of how to transcribe and/or score a particular part of a participant's LITMUS: MAIN-Afrikaans or STPA narrative.

## **4.8. Conclusion**

Action research has been chosen as the methodology for this study because it is an explorative method that allows the researcher to be a pioneer in her field of expertise. I chose an action research study because I wanted to explore the practical implementation and efficacy of the STPA to narrative intervention within the context of speech-language therapy in the institution in which I work. The purposively chosen participants for this study were four L1 Afrikaans-speaking Grade 3 boys. A control group comprised four other L1 Afrikaans-speaking Grade 3 boys. All learners had been diagnosed by psychologists as having SLD. Additionally; the learners' class teacher indicated that all eight had poor narrative skills. Data collection firstly involved using the LITMUS: MAIN-Afrikaans as a pre-test to establish a narrative skill baseline for all eight boys. The STPA was then used to facilitate the development of narrative skills of the four participants in the experimental group over a period of 6 weeks. All sessions were audio-recorded, and all narratives told by the participants were transcribed and then translated from Afrikaans into English. Additionally, a photo was taken of each Sandworld created by each participant. Finally, the LITMUS: MAIN-Afrikaans was used as a post-test to assess the participant's narrative skills after being involved in the STPA study. Thereafter, I made use of both quantitative and qualitative analysis and interpretation measures to explore the possible effects of using the STPA to foster narrative development within the context of speech-language therapy practice.

## Chapter 5: Results and analysis

### 5.1. Introduction

This chapter includes the results, analysis and interpretations of the Sandtray Play Approach (STPA) narrative study. I provide the experimental and control group participants' pre- and post-test results that were scored using the LITMUS: MAIN-Afrikaans. This was the assessment tool chosen to measure whether or not change in narrative ability took place during the STPA narrative intervention sessions. The pre- and post-test results for the experimental and control group are tabulated according to assessment criteria stipulated by the LITMUS: MAIN-Afrikaans. As stated in section 4.5, I also performed further structural complexity calculations and calculated the MLUw. The experimental and control groups' scores were individually calculated and were also averaged per group for comparison purposes. These results are tabulated and analysed in this chapter, and these results are discussed and explained. Examples are also provided of the types of internal state terms that were used by the participants in the pre- and post-test narratives. These analyses were done to answer the research question: What changes in narrative skills (if any), measured in terms of micro and macro structure, are brought about by the STPA in L1 Afrikaans-speaking Grade 3 learners with specific learning disability (SLD)?

In addition, I attempt to give the reader an indication of the type of development that occurred between pre- and post-testing. I do this by presenting excerpts from STPA narratives produced by the experimental participants; these specific narratives were chosen because they were deemed to represent the participants' overall narrative development at that particular point in the STPA intervention period. For each of the four participants, three representative narratives are provided. These were the baseline narrative (narrative 1); a narrative produced from the middle of the study; and a narrative produced towards or near the end of the study. For each of the three narratives, I assessed the quantity of language produced. This entailed tabulating the participants' individual results according to the number of words, utterances, conjunctive adverbs, subordinating and co-ordinating conjunctions, relative clauses and other embedded clauses used. The MLUw was also calculated and the number and type of internal state terms in each of the three narratives were recorded. The

results from each participant's baseline narrative were compared with results from his middle and end narratives. The results are then discussed for each participant.

## SECTION A:

### 5.2. Results from the pre- and post-intervention testing with the LITMUS: MAIN-Afrikaans

#### 5.2.1. Story structure

Story structure includes story grammar components comprising a setting; and episodes (that include a mental state as initiating event, goal, attempt, outcome, and an ending that has a mental state as final reaction). I provide E2's LITMUS: MAIN pre- and post-intervention story structure analysis below as an example of how the participants' and controls' story structure components were recorded.

*Table 4: E2's responses to story structure components*

Component	Pre-intervention		Post-intervention	
	Examples of correct responses	E2's response	Examples of correct responses	E2's response
<b>Setting</b>	Time and/or place reference, e.g. once upon a time/ one day/long ago in a forest/in a meadow/forest/ Garden	<b>Daar is voëltjies in die nes.</b> <i>There are little birds in the nest.</i>	Time and/or place reference, e.g. once upon a time/one day/long ago.. in a forest/in a meadow/at the lake / at the pond...	<b>Lank, lank gelede op die plaas.</b> <i>Once upon a time on the farm.</i>
<b>Episode 1:</b>				
<b>Mental state as initiating event</b>	Baby birds were <u>hungry/ wanted</u> food/ <u>cried/asked</u> for food	Did not include	Baby goat was <u>scared/ in danger / needed help/cried/called the mother</u>	<b>Mamma Bok het gesien haar kleintjie gaan verdrink.</b> <i>Mother Goat saw that her little one was going to drown.</i>
<b>Goal</b>	Bird wanted to feed chicks/ to catch/bring/get/find food/worms ...	<b>Mamma wil vir haar kleintjies gaan kos haal.</b> <i>Mother wants to go and fetch her little ones food.</i>	Goat wanted to help the baby/ to save the baby/to help the baby out of the water ...	Did not include
<b>Attempt</b>	Bird flew away, went away ...	Did not include	Goat ran/went into the water ...	<b>En toe gaan sy na die water toe.</b> <i>And then she went</i>



				<i>to the water.</i>
<b>Outcome</b>	Bird/mommy got/caught/brought food/ worms....	Did not include	The baby goat is safe/out of the water....	<b>En toe help sy hom uit.</b> <i>And then she helped him out.</i>
<b>Mental state as reaction</b>	Baby birds were not <u>hungry</u> anymore/ were <u>happy/satisfied</u>	Did not include	Baby goat was <u>relieved</u> / <u>safe</u> / <u>satisfied</u> / <u>not scared anymore</u>	Did not include
<b>Episode 2:</b>				
<b>Mental state as initiating event</b>	Cat <u>saw</u> mother flying away/ cat was <u>hungry</u>	Did not include	Fox <u>saw</u> mother looking away / fox was <u>hungry</u>	<b>'n Wolf kyk vir hom.</b> <i>A wolf watches him.</i>
<b>Goal</b>	Cat wanted to eat/catch/kill the baby bird(-s)	<b>Nou wil die kat die kleintjie gaan eet.</b> <i>Now the cat wants to go and eat the little one.</i>	Fox wanted to eat/catch/kill the baby goat	Did not include
<b>Attempt</b>	Cat climbed up to the tree/ jumped up/ tried to reach/get	<b>En klim hulle op die boom.</b> <i>And they climb up the tree.</i>	Fox jumped towards/jumped up/ tried to reach/get the baby goat	<b>En toe bestorm die wolf die kleintjie.</b> <i>And then the wolf stormed upon the little one.</i>
<b>Outcome</b>	Cat grabbed a baby bird (obs. not birds are afraid)	<b>Toe gryp hy die een kleintjie.</b> <i>Then he grabbed one of the little ones.</i>	Fox grabbed/caught the baby goat	<b>En toe gryp hy hom.</b> <i>And then he grabbed him.</i>
<b>Mental state as reaction</b>	Cat was <u>unhappy/disappointed</u> / still <u>hungry</u>	Did not include	Fox was <u>unhappy/ disappointed/still hungry</u>	<b>En skree hy.</b> <i>And he cried out.</i>
<b>Episode 3:</b>				
<b>Mental state as initiating event</b>	Dog <u>saw</u> that the bird was in danger / the dog was brave	<b>Toe sien die hond hom.</b> <i>And then the dog saw him.</i>	Bird <u>saw</u> that the goat was in in danger /	<b>En toe sien die arend hom.</b> <i>And then the eagle saw him.</i>
<b>Goal</b>	Dog decided/wanted to stop the cat, help/save/protect the birds	Did not include	Bird decided/wanted to stop the cat, help/save/protect the goat	Did not include
<b>Attempt</b>	Dog pulled/dragged the cat down, bit/attacked/chased the cat	<b>Toe trek die hond hom aan sy stert.</b> <i>Then the dog pulled him by the tail.</i>	Bird bit/dragged the fox's tail/ attacked/chased the fox	<b>En toe byt die arend hom op sy stert.</b> <i>And then the eagle bit him on his tail.</i>
<b>Outcome</b>	Cat ran away/ the birds were saved (obs. not cat is angry/birds happy)	<b>En jaag die kat weg.</b> <i>And chased the cat away.</i>	Fox let go of the baby goat / ran away / the goat was saved	<b>En toe jaag die arend hom weg.</b> <i>And then the eagle chased him away.</i>
<b>Mental state as reaction</b>	Birds were <u>relieved</u> ; dog/birds were happy; cat was <u>angry/ disappointed</u>	Did not include	Goats were <u>relieved/happy</u> ; fox was <u>disappointed</u>	Did not include

Story structure components (setting, mental state as initiating event, goal, attempt, outcome, and mental state as reaction) were scored for the experimental and control group (out of a maximum of 17 story structure components within three episodes). Table 5 shows these

scores as well as the average score for the experimental and control groups separately. Based on the average scores, the experimental group improved more than the control group in the period from the pre- to the post-test: both groups had a pre-test score of 41%, the control group's post-test score was 46% whereas that of the experimental group was 61%.

*Table 5: Story structure results for the LITMUS: MAIN pre and post test*

Group	Participant	Pre-test	Post- test
<b>Experimental</b>	<b>E1</b>	4/17	10/17
	<b>E2</b>	8/17	12/17
	<b>E3</b>	7/17	9/17
	<b>E4</b>	9/17	10/17
	<b>Average: Experimental group</b>	<b>7/17</b>	<b>10.3/17</b>
<b>Control</b>	<b>C1</b>	9/17	7/17
	<b>C2</b>	9/17	8/17
	<b>C3</b>	6/17	8/17
	<b>C4</b>	4/17	8/17
	<b>Average: Control group</b>	<b>7/17</b>	<b>7.8/17</b>

### 5.2.2. Structural complexity

Structural complexity refers to the various sequences of story structure/story grammar components. For classification purposes, I chose to refer to these combinations as either incomplete or complete. Incomplete complexity refers to the various combinations of story structure components that form an incomplete episode, such as action-outcome (A-O), goal (G), goal-attempt (G-A), and goal-outcome (G-O). Complete complexity refers to a full series of story structure components, namely goal-attempt-outcome (G-A-O). For example, participant E2's performance in Table 6 shows that, for the pre-test, he obtained a score of 2 for incomplete complexity, namely for one single G (in Episode 1) and one A-O (in Episode 3), and for complete complexity he scored 1 by achieving one G-A-O (in Episode 2). By contrast, he scored three for incomplete complexity during post-testing, namely for three A-O (one in each of the three episodes), and 0 for complete structural complexity as he did not produce any G-A-O episodes.

Table 6 shows each participant's pre- and post-intervention structural complexity scores. As can be seen from this table, a comparison of the average pre- and post-test results of the experimental group shows that they used slightly fewer incomplete episodes during post-testing and slightly more complete episodes. By contrast, the control group used slightly

more incomplete episodes, and there was no change in terms of complete complexity score from pre- to post-test. It needs to be taken into consideration that during the STPA sessions, I focused on teaching the participants about the beginning, middle and end of a story (thereby encouraging complete episodes). In the pre-test, neither the experimental participants nor the control participants used an introduction to their stories. During the post-test, the control group participants still did not make use of an introduction. All the experimental group participants, however, used *Lank, lank gelede* ‘Once upon a time’ to commence their post-test stories. Experimental group participant E2 even added a setting to his story, *op ‘n plaas* ‘on a farm’. These aspects are not accounted for in the complexity scores in Table 6.

**Table 6: Structural complexity (sequences of story grammar components)**

Group	Participant	Sequences	Pre-intervention	Post-intervention
Experimental	E1	Incomplete	1	3
		Complete	0	0
	E2	Incomplete	2	3
		Complete	1	0
	E3	Incomplete	3	1
		Complete	0	1
	E4	Incomplete	3	1
		Complete	0	1
	Average: Experimental group	Incomplete	<b>2.25</b>	<b>2.00</b>
		Complete	<b>0.25</b>	<b>0.50</b>
Control	C1	Incomplete	3	2
		Complete	0	0
	C2	Incomplete	2	2
		Complete	1	1
	C3	Incomplete	2	3
		Complete	0	0
	C4	Incomplete	2	3
		Complete	0	0
	Average: Control group	Incomplete	<b>2.25</b>	<b>2.50</b>
		Complete	<b>0.25</b>	<b>0.25</b>

Additionally, I analysed the experimental and control participants’ pre- and post-test LITMUS: MAIN-Afrikaans narratives to investigate any advancements in structural complexity in terms of linguistic components such as conjunctions and embedded clauses. Table 7 provides the definitions and manner in which the particular component is identified in the text:

*Table 7: Definitions and identification of linguistic components*

Linguistic component	Definitions of linguistic components from Thomas (2006) and Crystal (1991)	Manner in which linguistic component is identified in text
Adverb:  <ul style="list-style-type: none"> <li>Conjunctive adverb</li> </ul>	<p>An adverb is a word “which adds information about the action, event, or situation mentioned in the clause” (Thomas, 2006, p.21).</p> <p>A conjunctive adverb is an adverb of which the main function is a connective one (see Crystal, 1991). These adverbs connect two independent clauses to show, amongst others, sequence.</p>	<b>bolded</b>
Conjunction:  <ul style="list-style-type: none"> <li>Co-ordinating conjunction</li> <li>Subordinating conjunction</li> </ul>	<p>“A conjunction is a word or group of words that joins together words, groups, or clauses” (Thomas, 2006, p. 293).</p> <p>“A co-ordinating conjunction is a word such as ‘and’, ‘or’, ‘but’ which joins two or more words, groups, or clauses of equal status, for example two main clauses” (Thomas, 2006, p. 310).</p> <p>“A subordinating conjunction is a word such as ‘although’, ‘because’, or ‘when’ which begins a subordinate clause” (Thomas, 2006, p. 1444). Subordinating conjunctions thus link “linguistic units so that they have different syntactic status, one being dependent upon the other, and usually a constituent of the other” (Crystal, 1991, p. 334).</p>	CAPITALS
Phrase:  Clause:  <ul style="list-style-type: none"> <li>Relative clause</li> </ul>	<p>“A phrase is a small group of words which forms a unit, either on its own or within a sentence” (Thomas, 2006, p. 1077).</p> <p>“A clause is a group of words containing a verb. Sentences contain one or more clauses” (Thomas, 2006, p.246).</p> <p>A relative clause is a type of embedded clause, a “post-modifying clause in a noun phrase” (Crystal, 1991, p. 296), i.e. a clause that provided more information a directly preceding noun, such as <i>The man <u>who has two children</u> is considering adoption</i> in which the relative clause <i>who has two children</i> is modifying the noun <i>man</i>.</p>	<i>italicised</i>
Clause:  <ul style="list-style-type: none"> <li>Embedded clause</li> </ul>	<p>“A clause is a group of words containing a verb. Sentences contain one or more clauses” (Thomas, 2006, p.246).</p> <p>An embedded clause is one clause that is included in another clause (Crystal, 1991). Embedding is also sometimes called “subordination” and is distinct from co-ordination (Crystal, 1991).</p>	<u>underlined</u>

Identifying these five linguistic structures gave additional information about whether or not there were differences between the structural complexity of the experimental and that of the control group. The pre- and post-test LITMUS: MAIN-Afrikaans narratives of the two groups were analysed in terms of the use of conjunctive adverbs,<sup>8</sup> subordinating and co-ordinating conjunctions,<sup>9</sup> relative clauses,<sup>10</sup> and other embedded clauses.<sup>11</sup> Table 8 allows for comparison of the results. Overall, the average calculations indicate that there is very low usage of conjunctive adverbs, subordinating and co-ordinating conjunctions, relative clauses and embedded clauses in both the experimental and control group. There was therefore no difference in structural complexity between the two groups. These results concur with those presented in Table 6. It should be noted that during the STPA intervention sessions I did not focus on explicit teaching of the use of subordinating and co-ordinating conjunctions, relative clauses or other embedding.

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<sup>8</sup> The conjunctive adverb *toe* ‘then’ was frequently used in all of the participants’ narratives, as in the following examples:

- E1: En **toe** wil hy die ander bok vang.  
*And then he wanted to catch the other goat.*  
 E2: **Toe** trek die hond hom aan sy stert en jaag die kat weg.  
*Then the dog pulled the cat by his tail and chased the cat away.*

<sup>9</sup> I chose to consider all conjunctions except for the co-ordinating conjunction *en* ‘and’ because of this conjunction’s high frequency of occurrence; it is often over used and is one of the earliest developing conjunctions. The occurrence of *en* ‘and’ within stories does not imply advancements in structural maturity (Diessel, 2004). Examples of conjunctions used in the LITMUS: MAIN-Afrikaans narratives are the following:

- E1: WANT die kat wil hom gevang het.  
*Because the cat wanted to catch him.*  
 C1: MAAR toe kom die hond aan.  
*But then the dog came along.*

<sup>10</sup> Below are examples how relative clauses are included in the LITMUS: MAIN narratives.

- C3: En daar was ‘n kat wat vir die babavoëltjies wou gehad het.  
*And there was a cat that wanted the little birds.*  
 E4: Toe sien hy die kat wat die voëltjie gryp.  
*Then he saw the cat that wanted to grab the little bird.*

<sup>11</sup> Below are examples showing how other embedded clauses (apart from relative clauses) are included in the LITMUS: MAIN narratives.

- E4: Toe was hy bly lat die voël hom gehelp het.  
*Then he was glad that the bird had helped him.*  
 C2: En die bokkie het gekyk wat doen die voël met die jakkals.  
*And the little goat looked at what the bird was doing with the fox.*

Table 8: Linguistic components to determine structural complexity of narratives

Group	Partici- pant	Linguistic components	Number of occurrence of each linguistic component per total number of words (for <i>toe</i> and sub-/co-ordinating conjunctions) or clauses (for relative and other embedded clauses) in the transcription	
			Pre-intervention	Post-intervention
Experimental	E1	Conjunctive adverb <i>toe</i> ‘then’	0.09	0.11
		Sub-/Co-ordinating conjunctions	-	0.03 <sup>1</sup>
		Relative clauses	-	-
		Embedded clauses	-	-
	E2	Conjunctive adverb <i>toe</i> ‘then’	0.06	0.10
		Sub-/Co-ordinating conjunctions	-	-
		Relative clauses	-	-
		Embedded clauses	-	0.13
	E3	Conjunctive adverb <i>toe</i> ‘then’	0.05	0.07
		Sub-/Co-ordinating conjunctions	-	-
		Relative clauses	-	-
		Embedded clauses	0.11	0.14
	E4	Conjunctive adverb <i>toe</i> ‘then’	0.12	0.13
		Sub-/Co-ordinating conjunctions	-	-
		Relative clauses	0.83	-
		Embedded clauses	-	0.04
	Average: Experi- mental group	Conjunctive adverb <i>toe</i> ‘then’	<b>0.08</b>	<b>0.10</b>
		Sub-/Co-ordinating conjunctions	-	<b>0.00</b>
		Relative clauses	<b>0.03</b>	-
		Embedded clauses	<b>0.03</b>	<b>0.07</b>
Control	C1	Conjunctive adverb <i>toe</i> ‘then’	0.12	0.12
		Sub-/Co-ordinating conjunctions	0.01 <sup>2</sup>	-
		Relative clauses	-	-
		Embedded clauses	-	-
	C2	Conjunctive adverb <i>toe</i> ‘then’	0.05	0.07
		Sub-/Co-ordinating conjunctions	-	0.01 <sup>2</sup>
		Relative clauses	0.10	0.13
		Embedded clauses	0.10	0.13
	C3	Conjunctive adverb <i>toe</i> ‘then’	-	0.12
		Sub-/Co-ordinating conjunctions	-	-
		Relative clauses	0.07	0.09
		Embedded clauses	-	-
	C4	Conjunctive adverb <i>toe</i> ‘then’	0.06	0.11
		Sub-/Co-ordinating conjunctions	-	-
		Relative clauses	-	0.1
		Embedded clauses	-	-
	Average: Control group	Conjunctive adverb <i>toe</i> ‘then’	<b>0.10</b>	<b>0.10</b>
		Sub-/Co-ordinating conjunctions	<b>0.00</b>	<b>0.00</b>
		Relative clauses	<b>0.05</b>	<b>0.09</b>
		Embedded clauses	<b>0.03</b>	<b>0.07</b>

Notes: <sup>1</sup>want ‘because’ (subordinating conjunction), <sup>2</sup>maar ‘but’ (co-ordinating conjunction)

### 5.2.3. Internal state terms

According to Gagarina et al. (2012, p. 15), internal state terms are “interpreted as a marker for children’s understanding and awareness of intentionality and goal directed behaviour of protagonists.” In the LITMUS: MAIN-Afrikaans (Gagarina et al., 2012), internal state is classified according to:

- (i) perceptual state (e.g., *see, hear, feel, smell*);
- (ii) physiological state (e.g., *thirsty, hungry, tired, sore*);
- (iii) consciousness state (e.g., *alive, awake, sleeping, dead*);
- (iv) emotional state (e.g., *sad, happy, angry, worried, disappointed*);
- (v) mental verbs (e.g., *want/wanted, think, forget, decide, believe*); and
- (vi) linguistic verbs or verbs of saying/telling (e.g., *call, scream, warn, ask*).

I selected participant E4’s pre- and post-test narratives to serve as an example of how I identified internal state terms within the narratives. In the pre-test narrative, E4 used three internal state terms. These were:

- (i) *honger* ‘hungry’ (physiological state term): *Die babatjie voëltjies was **honger*** ‘The baby birds were hungry’;
- (ii) *sien* ‘see’ (perceptual state term): *Toe **sien** hy die kat wat die voëltjie gryp toe die mamma voël die ander babatjie kos gee* ‘Then he saw the cat that was grabbing the little bird while the mother bird was giving the other baby food’; and
- (iii) *bly* ‘glad’ (emotional state term): *Toe was die mamma voëltjie **bly*** ‘Then the mother bird was glad’.

In the post-test narrative, he used eight internal state terms:

- (i) *sien* ‘see’ (perceptual state term): *En toe **sien** die ander baba bokkie die jakkals* ‘And then the other baby goat saw the fox’; *Toe **sien** sy haar babatjie was aangeval by die wolf* ‘Then she saw her baby was being attacked by the fox’;
- (ii) *skreeu* ‘scream’ (linguistic verb): *Toe **skreeu** die bokkie* ‘Then the little goat screamed’;
- (iii) *gehoor* ‘heard’ (perceptual state term): *Toe het die ma **gehoor*** ‘Then the mother heard’;
- (iv) *gesien* ‘saw’ (perceptual state term): *Toe het daar ‘n voëltjie hom **gesien*** ‘Then a little bird saw him’;



- (v) *kwaad* ‘angry’ (emotional state terms): *Toe was hy kwaad* ‘Then he was angry’ (twice);
- (vi) *bly* ‘glad’ (emotional state terms): *Toe was hy bly lat die voel hom gehelp het* ‘Then he was glad that the bird had helped him’;
- (vii) *bang* ‘scared’ (emotional state terms): *Toe het die ander baba bokkie bang gewees* ‘Then the other baby goat became scared’.

Table 9 shows how many internal state terms each of the participants produced in their pre- and post-intervention narratives. The pre-intervention narratives of the two groups showed the same average number of internal state terms. Whereas the average number of internal state terms remains more or less constant for the control group participants, from pre- to post-testing, the average of the internal state terms more than doubled for the experimental group participants.

*Table 9: Number of internal state terms used by each participant*

Group	Participant	Pre-intervention	Post-intervention
<b>Experimental</b>	E1	2	4
	E2	3	7
	E3	2	2
	E4	2	8
	<b>Average: Experimental group</b>	<b>2.25</b>	<b>5.25</b>
<b>Control</b>	C1	2	2
	C2	2	2
	C3	3	3
	C4	2	3
	<b>Average: Control group</b>	<b>2.25</b>	<b>2.50</b>

One possible reason for the experimental group’s increase in internal state terms could merely be the increase in the length of their narratives from pre- to post-testing (see below). Another could be that I chose to focus on and deliberately encouraged questioning that involved using internal state terms during the STPA intervention sessions. For example, I asked the experimental group internal state evoking questions during sessions. I focused on eliciting emotional state questions to encourage the participants to explore their emotions and to develop empathy for their characters. I chose emotional state questions specifically because of the frequent reference to violence and death in the participants’ stories, in the hope that by talking about emotions less violence would be included during storytelling. Excerpt 13 and 14 show how I targeted the use of internal state terms:

**Excerpt 13: Therapist encouraging use of internal state terms (E2:17)**

- T: Hoe het die donkie **gevoel** toe hy **sien** almal baklei?  
*How did the donkey feel when he saw everyone fighting?*
- E2: **Bang.**  
*Scared.*
- T: Hoekom het die donkie **bang gevoel**?  
*Why did the donkey feel scared?*
- E2: Want hy het **gedink** hy gaan ook dood, toe dood hy!  
*Because he thought that he was going to die, then he died!*

**Excerpt 14: Therapist encouraging use of internal state terms (E3:8)**

- T: Hoe het die man **gevoel** toe hy kos in sy maag gekry het?  
*How did the man feel when he got some food in his stomach?*
- E3: **Bly.**  
*Glad.*
- T: Hoekom het hy **bly gevoel**?  
*Why did he feel glad?*
- E3: Want hy kon doodgaan!  
*Because he could have died!*
- T: Was hy dan só **honger** gewees?  
*Was he then that hungry?*
- E3: Ja!  
*Yes!*

Overall, the recurring themes of death and violence did not completely dissipate. During the study participants did, however, increasingly use more internal state terms to describe the feelings of their characters. The excerpt below shows how participant E4:10 used two such terms within the same answer.

**Excerpt 15: Participant using internal state terms (E4:10)**

- T: Hoe dink jy het die mannetjie wat by die huis moes bly om kos te maak **gevoel**?  
*How do you think the little man felt who had to stay at home and make food?*
- E4: Hy was **bly**, want hy wou altyd army-mannetjies gehad het wat daar by hom gebly het.  
*He was glad because he had always wanted army men to live with him.*  
 Want hy was **alleen**.  
*Because he was alone.*

Only participant E4, however, started to show empathy for his characters and began initiating internal state questions of his own. Excerpt 16 illustrates how E4 asks an internal state question during question time after E1's nineteenth narrative.

**Excerpt 16: Participant E4 asking question containing internal state term about E4:10**

- E4: Hoe het hy **gevoel** toe hy almal doodmaak en net nie ene nie?  
*How did he feel when he killed everyone except one?*
- E1: **Hartseer.**

- E4: *Sad.*  
**Hartseer?**  
*Sad?*
- E1: Sommer, want hy mag nie eintlik kleintjies doodmaak nie!  
*Just because, because he was not really allowed to kill the little ones!*
- T: So, hy was **hartseer** omdat hy die kleintjie eintlik ook wou doodgemaak het?  
*So, he was sad because he actually wanted to kill the little one?*
- E1: Ja.  
*Yes.*

#### 5.2.4. Quantity (as opposed to complexity) of language produced during assessments

The amount of language produced during pre- and post-intervention narratives was measured in terms of number of words and number of utterances, and MLUw. Table 10 indicates these measures for each participant in the experimental and control group pre- and post-intervention.

*Table 10: Participants' quantity of language produced during pre and post assessments*

Group	Participant	Sequences	Pre-intervention	Post-intervention
Experimental	E1	No of words	54	80
		No of utterances	10	13
		MLUw	5.40	6.15
	E2	No of words	52	125
		No of utterances	7	16
		MLUw	7.43	7.81
	E3	No of words	62	102
		No of utterances	9	14
		MLUw	8.89	7.29
	E4	No of words	101	192
		No of utterances	13	27
		MLUw	7.77	7.11
	<b>Average: Experimental group</b>	<b>No of words</b>	<b>67.25</b>	<b>124.75</b>
		<b>No of utterances</b>	<b>9.75</b>	<b>17.5</b>
		<b>MLUw</b>	<b>7.37</b>	<b>7.13</b>
Control	C1	No of words	75	59
		No of utterances	11	9
		MLUw	6.82	6.56
	C2	No of words	190	125
		No of utterances	21	15
		MLUw	9.05	8.33
	C3	No of words	95	78
		No of utterances	14	11
		MLUw	6.79	7.09
	C4	No of words	64	76
		No of utterances	10	10
		MLUw	6.40	7.60
	<b>Average: Control group</b>	<b>No of words</b>	<b>106.00</b>	<b>84.5</b>
		<b>No of utterances</b>	<b>14.00</b>	<b>11.25</b>
		<b>MLUw</b>	<b>7.57</b>	<b>7.51</b>

Findings indicate that the MLUw results for both the experimental and control group participants stayed more or less the same. The number of utterances and number of words produced by the control group decreased from the pre- to the post-test. However, for the participants in the experimental group, the number of words more than doubled and the number of utterances also increased from pre- to post-testing. By the end of the study, the experimental group members were thus producing longer and more complex stories than the control group members. It needs to be taken into consideration that throughout the STPA intervention sessions, I encouraged the experimental group participants to tell long stories, taught them new words and often corrected their vocabulary.

### **5.2.5. Comprehension**

According to Thomas (2006, p. 282), “comprehension is full knowledge and understanding of something.” Table 11 shows pre- and post-intervention comprehension scores that the experimental and control group obtained on the LITMUS: MAIN-Afrikaans. The average scores indicate that the experimental group fared better in the pre- and post-test on comprehension than did the control group. During the STPA intervention sessions, the participant who told his Sandworld story was asked questions pertaining to the story. Listeners took turns asking questions. Additionally, for every story told, I added a question relating to internal state that the narrator had to answer. It is possible that the experimental groups’ regular exposure to questioning during the STPA encouraged and improved their comprehension skills. It is, however, unclear whether or not other factors could also have influenced the final results. For example, participants E2 and E4 were also receiving speech language therapy during this time. In the control group, other factors such as performance anxiety could also have influenced the pre- and post-test scores. For example, control participants C1 and C4 appeared anxious during the pre-test and possibly underperformed. In the post-test, however, they both appeared more confident and therefore possibly performed better and more representatively on the post-test. Comprehension results will not be analysed in any detail; because of the difference in pre-test scores between the two groups, and thus because the groups were not highly comparable during pre-testing, inter-group comparison of post-test scores is not possible.

*Table 11: Participants' comprehension results*

Group	Participant	Pre-intervention	Post-intervention
<b>Experimental</b>	E1	8	8
	E2	5	9
	E3	7	10
	E4	6	9
	<b>Average: Experimental group</b>	<b>6.50</b>	<b>9.0</b>
<b>Control</b>	C1	2	9
	C2	6	7
	C3	10	7
	C4	5	8
	<b>Average: Control group</b>	<b>5.75</b>	<b>7.75</b>

### 5.2.6. Concluding summary of LITMUS: MAIN pre and post-assessment results

Table 12 summarises the pre- and post-test scores of the experimental and control groups. As this table shows, in terms of story structure, the average scores indicate that the experimental group improved more than the control group. Structural complexity scores shows that the experimental group, but not the control group, improved with regards to using less incomplete and more complete episodes. Additionally, it was found that there was a low frequency of use of conjunctive adverbs, subordinating and co-ordinating conjunctions, and relative and other embedded clauses in both the experimental and control group's pre- and post-intervention narratives. Overall, there was thus no difference between the two groups in terms of the structural complexity of their narratives. MLUw results for both the experimental and control group participants also stayed more or less the same in the pre and post-tests. However, the number of words and number of utterances produced by the control group decreased from the pre to the post-test, whereas those produced by the experimental group increased. This means that by the end of the study the experimental group participants were producing longer and more complex stories than the control group participants. With regards to internal state terms, the experimental group also produced more in their post-test than their pre-test, whereas the control group's use of these terms remained fairly constant. In terms of comprehension scores, the experimental group fared better than control group in both the pre- and the post-test. It was, however, unclear whether or not other factors, as mentioned in section 5.2.5, could also have influenced these results.

*Table 12: Summary of overall findings*

	Experimental group: pre & post								Control group: pre & post							
	E1		E2		E2		E4		C1		C2		C3		C4	
	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
<b>Story structure /17</b>	4	10	8	12	7	9	9	10	9	7	9	8	6	8	4	8
<b>Structural complexity</b>	1:0	3:0	2:1	3:0	3:0	1:1	3:0	2:1	3:0	2:0	2:1	2:1	2:0	3:0	2:0	3:0
<b>Internal state terms</b>	2	4	3	7	2	2	2	8	2	2	2	2	3	3	2	3
<b>Comprehension /10</b>	8	8	5	9	7	10	6	9	2	9	6	7	10	7	5	8
<b>MLUw</b>	5.4	6.2	7.4	7.8	8.9	7.3	7.8	7.1	6.8	6.6	9.1	8.3	6.8	7.1	6.4	7.6
<b>No of words</b>	54	80	52	125	62	102	94	192	75	59	190	125	95	78	64	76
<b>No of utterances</b>	10	13	7	16	9	14	12	27	11	9	21	15	14	11	10	10

Overall, it appeared that the STPA intervention sessions made a fair difference to the experimental group's use of story structure components, internal state terms, comprehension, number of words, and number of utterances. Considering that these improvements occurred over a period of 6 weeks, a longer intervention period could possibly render more promising results. During this study, I made adaptations to the STPA (Smith, 2012): I focussed on training and encouraging the experimental group to use and understand story grammar components such as the beginning, middle and end of a story. I also modelled to and encouraged the experimental group to understand the use of internal state terms through comprehension questions. In accordance with the STPA (Smith, 2012), the listeners were instructed to ask the narrator questions after each Sandworld story was narrated. I specifically asked questions that contained internal state terms in order to expose the participants to such terms. Throughout the STPA intervention sessions, I also encouraged the experimental group participants to tell longer stories that included conclusions. I furthermore taught them new words and often corrected their vocabulary. As discussed previously, results indicate that the experimental group showed improvements in all the areas that I directly targeted, namely

story grammar components; internal state terms; comprehension; number of words; and number of utterances. These results lead me to conclude that the STPA can bring about a significant improvement in the macro and micro structural complexity of narratives, depending on the duration of the therapy program; the concepts that are taught during the mini sessions; and the manner in which the sessions are structured and adapted to suit the individual participant's narrative development needs.

## SECTION B:

### 5.3. Progress over the course of the 6 weeks of intervention

Section B describes the progress made by participants in the experimental group during the course of the STPA intervention. A transcript of the narrative produced on the first contact day (before they had received any instruction), another transcript around the middle of the 6 weeks of intervention and a further transcript during the last week of intervention are presented for each experimental group participant. Narratives were selected for their representativeness of the particular participant's narrative abilities at that particular stage.

For each narrative, I focussed on the number of words, number of utterances, MLUw and not the story structure and number of complete episodes because the selected narratives were not controlled for length. Unlike the LITMUS-MAIN narratives, the story line and length of each narrative differed, and as such intra- and inter-participant comparisons of story structure and (in)complete episodes were not possible. The structural complexity for each selected narrative was, however, calculated by identifying the occurrence of conjunctive adverbs (in **bold**), conjunctions (in CAPITALS); relative clauses (in *bold and italics*) and other embedded clauses (underlined); and, additionally, internal state terms were identified (**bold and underlined**). Each participant's narratives are now analysed under a separate heading.

#### 5.3.1. Participant E1: STPA narrative examples

Experimental participant 1 attended 17 therapy sessions and produced 20 stories. His co-operation during STPA sessions varied throughout the study. Table 13 summarised selected features of his three narratives.



**Table 13: Summary of participant E1's narratives results**

	Before intervention	Mid-way through intervention	Towards the end of intervention
<b>No of words</b>	17	81	152
<b>No of utterances</b>	2	10	18
<b>MLUw</b>	8.50	8.10	8.44
<b>Sub-/Co-ordinating conjunctions</b>	0	0	0
<b>Conjunctive adverb <i>toe</i> 'then'</b>	0	6	14
<b>No of relative clauses</b>	0	2	1
<b>No of other embedded clauses</b>	0	0	2
<b>Internal state terms</b>	0	3	2

As can be seen from Table 13, the amount of language produced during narrative production increased over the course of 6 weeks' intervention. Participant E1 initially produced a very short and simple story (2 utterances comprising 17 words in total, with no subordinating or co-ordinating conjunctions; conjunctive adverbs; and embedding (see Excerpt 17; a picture of the Sandworld on which this story is based appears in Figure 5.)

**Figure 5: The first Sandworld created by E1:1 (before STPA intervention)**

**Excerpt 17: The complete first narrative produced by participant E1 (before STPA intervention)**  
**(E1:1)**

E1: Die mense is besig om die diere dood te skiet.  
*The people are busy shooting the animals.*  
 En hulle het 'n pot vol goud.  
*And they have a pot filled with gold.*

Towards the middle of the intervention period, the MLU of E1's narratives remained more or less constant, but the number of utterances had increased and so had the number of words. This was also an increase when comparing the second narrative with that produced towards the end of intervention (see narratives in Excerpts 18 and 19). In addition, the participant started using a limited number of conjunctive adverbs, relative and other embedded clauses, and some internal state terms in his narratives. Specifically, he used one perceptual state term (*sien* 'see') and two linguistic verbs (*sê* 'say', *vra* 'ask') in the second narrative, and one perceptual state term (*voel* 'feel') and one linguistic verb (*sê* 'say') in the third narrative. Pictures of the Sandworlds on which these stories are based appear in Figures 6 and 7.



*Figure 6: A Sandworld created by E1:12 towards the middle of the STPA intervention period*

In Figure 6, participant E1 had hidden the crocodile, snake, and dinosaur (all the ferocious characters) under the sand. These characters only appeared when they were referred to in the story and therefore are not evident in this introductory Sandworld picture.

***Excerpt 18: Narrative: produced by E1 towards the middle of the STPA intervention period (E1:12)***

E1: Lank, lank gelede was daar 'n skilpad en 'n padda.  
*Once upon a time there was a tortoise and a frog.*  
**Toe** kom vra die padda vir die krokodil vir water.  
*Then the frog came to ask the crocodile for water.*  
**Toe** sê die krokodil: "Nee!"  
*Then the crocodile said, "No!"*

**Toe sien** hulle ietsie **wat daar onder beweeg**.  
*Then they saw something that was moving below.*  
**Toe** het die slang die padda opgeëet.  
*Then the snake ate the frog.*  
 En **toe** kom hier dié dinosourus en eet hy die krokodil dood.  
*And then there came this dinosaur and he ate the crocodile to death.*  
 En daar is 'n skietende ster **wat val op die skilpad se kop**.  
*And there is a shooting star that fell on the tortoise's head.*  
**Toe** eet die dinosourus die blare op.  
*Then the dinosaur ate the leaves.*  
 En hy eet die slang ook op.  
*And he also ate up the snake.*  
 Die einde!  
*The end!*



**Figure 7:** A Sandworld created by E1:18 towards the end of the STPA intervention period

In Figure 7, the snakes were again underground and only surfaced later. When participant E1 mentioned that the characters were drinking beer, participant E2 gave participant E1 a little container to add to his Sandworld to represent the beer bottle.

**Excerpt 19: Narrative produced by E1 towards the end of the STPA intervention period (E1:18)**

E1: Lank, lank gelede was daar op 'n plaas was dinosourusse.  
*Once upon a time on a farm there were dinosaurs.*  
 En 'n baas **wat vir al die swartes gesê het hulle moet vir die diere gaan kos gee**.  
*And a boss that told all the black people that they had to feed the animals.*  
**Toe** kom daar so 'n mooi meisie aan.  
*Then a pretty girl came along.*  
**Toe** ry sy met die dinosourus.

*Then she rode on the dinosaur.*  
 Toe val daai draak in die see in **waar die haai so is**.  
*Then that dragon fell in the sea where the shark was.*  
 En **toe** help 'n dolfyn weer vir die dinosoer laat hy kan uitkom.  
*And once again the dolphin helped the dinosaur to get out.*  
**Toe** is daar twee slange daarso.  
*Then there were two snakes there.*  
**Toe** het die oupa hierdie geweer gehad.  
*Then the grandfather had this gun.*  
 Toe skiet hy die slang in die kop.  
*Then he shot the snake in the head.*  
**Toe** drink hy en sy.  
*Then he and she drank.*  
 Hy en 'n kind drink lekker bier saam.  
*He and a child drank tasty beer together.*  
**Toe** gaan swem die dinosourus en hulle twee.  
*Then the dinosaur and those two went swimming.*  
**Toe** is die slang nog nie dood nie.  
*Then the snake was not dead yet.*  
**Toe** ontplof sy kop af.  
*Then his head exploded off.*  
 En **toe** grou die oom en die kind vir die pot goud.  
*And then the uncle and the child went digging for the gold.*  
**Toe voel** hulle iets is hard hier binne.  
*Then they felt something hard here inside.*  
**Toe** is dit die pot goud!  
*Then it was the pot of gold!*  
 Die einde!  
*The end!*

### 5.3.2. Participant E2: STPA narrative examples

Experimental participant 2 attended 16 therapy sessions and produced 18 stories during the 6 weeks of intervention. His co-operation was good throughout the study. The features of his three selected narratives are summarised in Table 14.

*Table 14: Summary of participant E2's narratives results*

	Before intervention	Mid-way through intervention	Towards the end of intervention
<b>No of words</b>	80	319	297
<b>No of utterances</b>	11	47	38
<b>MLUw</b>	7.27	6.79	7.82
<b>Sub-/Co-ordinating conjunctions</b>	1x <i>maar</i> 'but'	4x <i>maar</i> 'but'	1x <i>maar</i> 'but' 1x <i>want</i> 'because' 1x <i>voordat</i> 'before' 1x <i>totdat</i> 'until'
<b>Conjunctive adverb <i>toe</i> 'then'</b>	0	36	27
<b>No of relative clauses</b>	0	0	3
<b>No of other embedded clauses</b>	1	3	3
<b>Internal state terms</b>	0	6	9



Table 14 indicates a noticeable increase in the number of words and utterances from the initial story to story presented around the middle of intervention. The participant understood the STPA procedure well and enjoyed telling elaborate and action-filled stories. He did not want to end his stories. When I tried to introduce the egg timer to limit the length of the stories, the participants rebelled against the idea and refused to tell shorter stories. Towards the end of the study, the experimental group participants made a group decision to place a 5-minute time limit to their stories using the egg timer. The timer assisted and encouraged participant E2 in managing his stories so that less “rambling” occurred. For example, no timer was used for the narrative selected in the middle of the study. However, when the near to the end story was narrated, the participant used the timer and was more willing to end off his story. This is probably the reason for the decrease in the number of words from the middle to the last story. The number of internal state terms also increased from 0 to 6 to 9. In the second selected narrative, E2 used two mental verbs (*wil* ‘want to’, *wou* ‘wanted to’) and one consciousness term (*dood* ‘dead’). He also used the perceptual state term *sien* ‘see’ three times. In the third narrative, he used the mental verb *wil* ‘want to’ twice, one perceptual state term (*sien* ‘see’) twice, two consciousness terms (*dood* ‘dead’, *veilig* ‘safe’), and two emotional state terms (*bly* ‘glad’, *alleen* ‘alone’). Figures 8, 9 and 10, and 11 show the Sandworlds on which the narratives in Excerpts 20, 21 and 22 are passed, respectively.



*Figure 8: The first Sandworld created by E2 (before STPA intervention)*

*Excerpt 20: First narrative produced by participant E2 (before STPA intervention) (E2:1)*

E2: Dit was op die plaas.  
*It was on the farm.*  
 Die boer het bakstene rondgery.  
*The farmer carted around bricks.*  
 Die hond het op die bakstene gestaan.  
*The dog stood on the bricks.*  
 Die vrou het vir die hoenders toe gegee mielies.  
*The lady gave the chickens mielies.*  
 Die bok het gras geëet.  
*The goat ate grass.*  
 Die kind het na die skape gekyk.  
*The child looked after the sheep.*  
 En die vark was in sy modder.  
*And the pig was in the mud.*  
 En die smurf het gekyk of daar niks verkeerd gaan nie.  
*And the smurf checked that nothing went wrong.*  
 MAAR het hy lanks die huis gekyk.  
*But had he looked next to the house.*  
 Baklei daar 'n slang, 'n pofadder, en 'n jakkals.  
*There was a snake, a pofadder, and a fox fighting.*  
 En die hoender het een groot eier gelê.  
*And the chicken laid one great big egg.*



*Figure 9: Sandworld created by E2 towards the middle of the STPA intervention period*



*Figure 10: Magnified view of Figure 9*

*Excerpt 21: Narrative produced by participant E2 towards the middle of the STPA intervention period (E2:12)*

- E2: Lank, lank gelede was daar 'n mens.  
*Once upon a time there was a human.*  
 My drie karakters is die mens, die aap en die spinnekop.  
*My three characters are the human, the monkey and the spider.*  
 En die aap en die spinnekop was agter die pot goud aan.  
*And the monkey and the spider were after the pot of gold.*  
 MAAR die mens het 'n spies gehad.  
*But the human had a spear.*  
**Toe** gooi hy dit na die spinnekop.  
*Then he threw it at the spider.*  
**Toe** kry hy nog een.  
*Then he got another one.*  
**Toe** gooi hy die aap.  
*Then he threw at the monkey.*  
 En **toe** gooi hy per ongeluk mis.  
*And then he accidentally missed.*  
**Toe** kom die spinnekop binne die water nader aan die pot goud.  
*Then the spider went inside the water closer to the pot of gold.*  
 En **toe** gooi die man daai ding om.  
*And then the man threw that thing over.*  
**Toe** val al die dinge in die water op die spinnekop.  
*Then all the things in the water fell on the spider.*  
**Toe** klim hy uit.  
*Then he climbed out.*  
 Die spinnekop het ook uitgeklim.  
*The spider also climbed out.*  
 En **toe** wen die mense.  
*And then the people won.*  
**Toe** kon hy sy pot goud hou.



*Then he could keep his pot of gold.*  
 En **toe** was dit donker.  
*And then it was dark.*  
**Toe** skyn die sterre.  
*Then the stars shone.*  
**Toe sien** die mense nie die spinnekop nie.  
*Then the humans did not see the spider.*  
 MAAR die spinnekop kon in die donker **gesien** het.  
*But the spider could see in the dark.*  
**Toe** gaan hy na die pot goud toe.  
*Then he went to the pot of gold.*  
**Toe** stamp hy die bakstene om.  
*Then he bump over the bricks.*  
**Toe sien** die mens daar lê 'n baksteen in die water.  
*Then the human saw a brick lying in the water.*  
 En **toe sien** hy hier vat hy die pot goud.  
*And then he saw him taking the pot of gold.*  
**Toe** loop hy oor.  
*Then he walked over.*  
**Toe** gaan vat hy die pot goud.  
*Then he took the pot of gold.*  
 MAAR eers het hy die spinnekop geTH.  
*But first he stabbed the spider.*  
**Toe** vat hy weer die pot goud, sit hom weer daar.  
*Then he took the pot of gold again, put it there again.*  
 Klim hy in sy tent.  
*Then he climbed in his tent.*  
 Dag.  
 Day.  
 Weer nag.  
 Night again.  
**Toe** gaan slaap hy.  
*Then he went to sleep.*  
 En **toe** is dit nou my einde.  
*And now it is time for my ending.*  
 MAAR ek kom nog daarby.  
*But I am still getting there.*  
**Toe wil** die spinnekop nie ophou nie, né.  
*Then the spider did not want to stop, hey.*  
**Toe** gaan gaan hy hierso onder die grond in langs die pot goud.  
*Then he went in here under the ground next to the pot of gold.*  
 En die aap het hier so hier gaan insink laat hy die pot goud gryp.  
*And the monkey sunk in here to grab the pot of gold.*  
**Toe** val dit.  
*Then it fell.*  
**Toe wou** die man 'n boobytrap maak.  
*Then the man wanted to make a boobytrap.*  
**Toe** val die sand op hom.  
*Then the sand fell on him.*  
**Toe** maak hy die water ook toe.  
*Then he also closed the water.*  
 En **toe** hardloop hulle terug.  
*And then they ran back.*  
**Toe** val hulle deur die sand.  
*Then they fell through the sand.*

**Toe** val hulle in die water in.  
*Then they fell in the water.*  
**Toe** kom die sand weer.  
*Then the sand came again.*  
**Toe** kan hulle nie uit nie.  
*Then they could not get out.*  
**Toe dood** hulle.  
*Then they died.*  
 Die einde!  
*The end!*



**Figure 11:** Sandworld created by E2 towards the end of the STPA intervention period

**Excerpt 22:** Narrative produced by participant E2 towards the end of the STPA intervention period  
 (E2:16)

E2: Lank, lank gelede was daar 'n mens **wat die goud wil oppas het**.  
*Once upon a time there was a human that wanted to protect the pot of gold.*  
 En **toe** kom daar so 'n geraamte-draak en twee geraamte-mannetjies.  
*And then there came a skeleton dragon and two little skeleton men.*  
 Die mens het so goed om die groot draak gegooi.  
*The human threw something around the dragon.*  
**Toe** kom die draak los.  
*Then the dragon broke loose.*  
**Toe** kom daar so groot slang hier agter die draak uit.  
*And then a giant snake came out from behind the dragon.*  
 En **toe** fight die slang en die draak.  
*And then the snake and the dragon fought.*  
 Slang hierso op die draak.  
*Snake here on the dragon.*  
**Toe** hy net hier kom, né, toe pik hy hom.  
*When he had just come here, hey, he bit him.*  
 Hy't hom hier op sy nek gepik.

*He bit him here on his neck.*  
**Toe** werk sy gif nie daar nie **toe**.  
*Then his poison did not work there then.*  
**Toe** val die draak om.  
*Then the dragon fell over.*  
 En **toe** was hy nog nie **dood** nie.  
*And then he was still not dead.*  
 Gooi die slang só ketting om die draak dat hy nie kan opstaan nie.  
*Then the snake threw something like a chain over the dragon so that he could not stand up.*  
 Die ketting was aan.  
*The chain was on.*  
**Toe** kom die mannetjie met die swaard.  
*Then the little man with the sword came.*  
**Toe** steek hy die draak.  
*Then he stabbed the dragon.*  
**Toe** was dit nag.  
*Then it was night.*  
**Toe** kon hulle glad nie die mense sien nie, net die blou draak.  
*Then they could not see the humans at all, only the blue dragon could.*  
**Toe** hol hy die kant toe.  
*Then he dashed to this side.*  
**Toe** trap hy op die een skeleton.  
*Then he stood on the one skeleton.*  
 Hy het hom nie gesien nie.  
*He had not seen him.*  
 Die slang het die pot goud gesteel.  
*The snake stole the pot of gold.*  
**Toe** spring die draak op hom.  
*Then the dragon jumped on him.*  
 En **toe** byt en byt die draak hom.  
*And then the dragon bit and bit him.*  
**Toe** gooi die slang hom af.  
*Then the snake threw him off.*  
**Toe** was dit dag.  
*Then it was daytime.*  
**Toe wil** hy na die pot goud toe gaan.  
*Then he wanted to go to the pot of gold.*  
 MAAR toe was daar so bal **wat uitskiet wat aan die brand is**.  
*But then there was something like a burning ball that shot out.*  
**Toe** brand hy die slang.  
*Then he burnt the snake.*  
 En **toe** was die slang **dood**.  
*And then the snake was dead.*  
 Die geraamte-mannetjie het die pot goud gaan beskerm VOORDAT daar nog kom.  
*The little skeleton man went to protect the pot of gold before anyone else came.*  
 En **toe** beskerm hulle hom.  
*And then they protected him.*  
**Toe** kom daar nog 'n slang en pik dié enetjie.  
*Then another snake came and bit this little one.*  
 En **toe** steek die ander geraamte hom!  
*And then the other skeleton stabbed him!*  
 En **toe** het hulle veilig gelewe.  
*And then they lived safely.*  
 En die mens was bly.  
*And the human was glad.*

WANT hy was elke keer alleen TOTDAT daar geraamte-mannetjies en daar draak gekom het.  
*Because he was alone all the time until the little skeleton men and the dragon came.*  
 My einde.  
*My end.*

### 5.3.3. Participant E3: STPA narrative examples

Participant E3 attended 13 therapy sessions produced 18 stories during the 6 weeks of STPA therapy. His co-operation was fair throughout the study. The features of E16's narratives are summarised in Table 15.

*Table 15: Summary of participant E3's narratives results*

	Before intervention	Mid-way through intervention	Towards the end of intervention
No of words	48	115	178
No of utterances	5	13	21
MLUw	9.60	8.85	8.48
Sub-/Co-ordinating conjunctions	0	1x <i>want</i> 'because' 1x <i>anders</i> 'otherwise'	1x <i>maar</i> 'but'
Conjunctive adverb <i>toe</i> 'then'	3	8	16
No of relative clauses	0	2	0
No of other embedded clauses	1	4	8
Internal state terms	2	1	9

Table 15 indicates a steady increase in the number of words and utterances from the initial story to the story produced around the middle of intervention. The number of embedded clauses also increased, as did the number of internal state terms used. He used two instances of a consciousness term (*dood* 'dead') in his initial story, and one mental verb (*besluit* 'decided') in the story he produced around the middle of the intervention period. In the last story, he used mental verbs (3x *besluit* 'decided', *dink* 'think', *vergeet* 'forget'), a perceptual state term (*sien* 'see') and linguistic verbs (2x *sê* 'say', 1x *gesmeek* 'pleaded'). Figures 12, 13, and 14 illustrate Sandworlds on which he based his narratives. The narratives themselves are presented in Excerpts 23, 24 and 25, respectively.



*Figure 12: The first Sandworld created by E3 (before STPA intervention)*

*Excerpt 23: First narrative produced by participant E3 (before STPA intervention) (E3:1)*

- E3: Lank, lank gelede was daar 'n oorlog tussen die aliens en die mense.  
*Once upon a time there was a war between the aliens and the humans.*  
 En **toe** skiet die tank die dinosoer **dood**.  
*And then the tank shot dead the dinosaur.*  
 En die alien was so slim hy het die kar gevat.  
*And the alien was so clever that he took the car.*  
 En **toe** park hy 'n kar op 'n mens.  
*And then he parked the car on top of the human.*  
 En toe skiet almal die alien **dood**.  
*And then everyone shot dead the alien.*



*Figure 13: Sandworld created by E3 towards the middle of the STPA intervention period*



**Excerpt 24: Narrative produced by participant E3 towards the middle of the STPA intervention period (E3:11)**

- E3: Lank, lank gelede was daar een koning **wat niks kos gehad het**.  
*Once upon a time there was a king who had no food.*  
 En daar was nog 'n koning **wat ook niks kos gehad het**.  
*And there was also another king who also did not have any food.*  
 En **toe** gaan stuur hy 'n jagter.  
*And then he sent a hunter.*  
 En die ander koning het ook 'n jagter gestuur.  
*And the other king also sent a hunter.*  
 En **toe** kom altwee jagters by dieselfde vark aan.  
*And then both hunters came across the same pig.*  
 En toe baklei hulle oor wie kry die varkie.  
*And then they fought about who was going to get the little pig.*  
 En **toe besluit** die klein blou mannetjie hulle moet dit eerder deel.  
*And then this little blue man decided that they should rather share it.*  
**WANT ANDERS** gaan die die hele dag baklei oor wie kry wat!  
*Otherwise they would have been fighting all day about who gets what!*  
 En **toe** steek hy sy mes in die vuur.  
*And then he stuck his knife in the fire.*  
 En **toe** maak hy die varkie dood.  
*And then he killed the little pig.*  
 En **toe** sny hy die vark in die helfte.  
*And then he cut the pig in half.*  
 En **toe** kry elke koning kos.  
*And then each king received food.*  
 Die einde!  
*The end!*



**Figure 14: Sandworld created by E3 towards the end of the STPA intervention period**

**Excerpt 25: Narrative produced by participant E3 towards the end of the STPA intervention period (E3:17)**

E3: Lank, lank gelede in die zoo, die dieretuin, was daar een donkie wat vir 'n draak gewerk.  
*Once upon a time in the zoo, the zoo there was one donkey that worked for a dragon.*  
 En die draak was lelik met die donkie.  
*And the dragon was nasty to the donkey.*  
 En **toe** was die draak lelik met die donkie.  
*And then the dragon was nasty to the donkey.*  
 En **toe besluit** die donkie hy moet 'n lyn trek.  
*And then the donkey decided he must draw a line.*  
 En **toe besluit** die draak hy gaan 'n lekker tyd hê by homself.  
*And then the dragon decided he is going to have a good time by himself.*  
 En **toe dink** die draak die donkie gaan 'n slegte tyd hê.  
*And then the dragon thought the donkey would have a bad time.*  
 En **toe besluit** die draak hy moet sop maak.  
*And then the donkey decided he had to make some soup.*  
 En **toe vergeet** hy hy moet water insit.  
*And then he forgot that he had to put water in.*  
 En **toe sien** hy die donkie het water.  
*And then he saw that the donkey had water.*  
 En **toe** nooi hy die donkie.  
*And then he invited the donkey.*  
 En **toe** hou die donkie 'n party met sy maatjies.  
*And then the donkey held a party with his little friends.*  
 En **toe** drink hy lekker bier.  
*And then he drank delicious beer.*  
 En die draak het die donkie heeltyd **gesmeek** vir water.  
*And the dragon continuously begged the donkey for water.*  
 MAAR, en **toe sê** die donkie hy moet jammer sê en nooit weer lelik wees met hom.  
*But, and then the donkey said he had to say sorry and never be nasty to him again.*  
 En **toe** doen hy dit.  
*And then he did it.*  
 En **toe** was die lyn af!  
*And then the line was taken off!*  
**Toe** dra hy die lyn af.  
*And then he carried the line off.*  
 En **toe** kry hy lekker watertjies vir sy sop.  
*And then he got delicious water for his soup.*  
 En **toe** drink hulle almal lekker sop!  
*And then everyone drank delicious soup!*  
 Die einde.  
*The end.*

### 5.3.4. Participant E4: STPA narrative examples

Experimental participant 4 attended 17 therapy sessions during the 6-week period and produced a total of 18 stories. His co-operation was good throughout the study. The relevant features of his three selected narratives are presented in Table 16.



**Table 16: Summary of participant E4's narratives results**

	<b>Before intervention</b>	<b>Mid-way through intervention</b>	<b>Towards the end of intervention</b>
<b>No of words</b>	61	584	317
<b>No of utterances</b>	8	73	44
<b>MLUw</b>	7.63	8.00	7.20
<b>Sub-/Co-ordinating conjunctions</b>	0	1x <i>as</i> 'if' 2x <i>maar</i> 'but' 3x <i>want</i> 'because' 1x <i>tot</i> 'until' 3x <i>toe</i> 'when' 1x <i>sodat</i> 'so that'	1x <i>maar</i> 'but' 2x <i>want</i> 'because', 1x <i>totdat</i> 'until'
<b>Conjunctive adverb <i>toe</i> 'then'</b>	7	53	26
<b>No of relative clauses</b>	0	1	2
<b>No of other embedded clauses</b>	1	8	1
<b>Internal state terms</b>	2	12	4

Table 16 indicates an increase in the number of words and utterances from the initial story to the story presented around the middle of the intervention period. Like E2, this participant towards the middle of the study refused to use the timer and he produced very long stories. Towards the end of the study, however, participant E4 willingly ended his story when the timer went off. Therefore, the last narrative (E4:17; see Excerpt 28) contained fewer words and fewer utterances than the middle narrative (E4:15; see Excerpt 27). The number of internal state terms also increased: Participant E4 used one mental verb (*wil* 'want to') and one consciousness term (*dood* 'dead') in his initial story. In the middle narrative, he used perceptual state terms (2x *sien* 'see', 1x *gesien* 'seen', 1x *hoor* 'hear', 1x *gehoor* 'heard', 1x *raak* 'touch'), a consciousness term (2x *wakker* 'awake'), a physiological state term (*gesond* 'healthy'), one emotional state term (*alleen* 'alone') and two mental verbs (*gedink* 'thought', *uitvind* 'discovered'). In the narrative produced towards the end of the intervention period, he used one perceptual state term (*sien* 'see'), two mental verbs (*wil* 'want to', *agterkom* 'realise') and one physiological state term (*gesond* 'healthy'). Pictures of the Sandworlds on which these stories are based appear in Figures 15, 16 and 17, respectively, and the transcripts on Excerpts 26, 27 and 28.



*Figure 15: First Sandworld created by E4 (before STPA intervention)*

*Excerpt 26: First narrative produced by participant E4 (before STPA intervention) (E4:1)*

- E4: Ok, die good guys, né, hulle het 'n treasure gekry.  
*Ok, the good guys, hey, they found a treasure.*  
**Toe** die skelms en die skeletons gekom.  
*Then the crooks and the skeletons came.*  
**Toe** wil hulle dit hê.  
*Then they wanted it.*  
 En **toe** het die dragon en die vlermuis.  
*And then the dragon and the bat.*  
**Toe** gaan haal ek 'n die cannon.  
*Then I went to fetch the cannon.*  
**Toe** skiet ek die drakon **dood**.  
*Then I shot the dragon dead.*  
 En **toe** hardloop ek op na die perdjie toe.  
*And then I ran up to the little horse.*  
**Toe** gaan kyk ek net dat almal dood is.  
*Then I just went to see that everyone was dead.*



*Figure 16: Sandworld created by E4 towards the middle of the STPA intervention period*

*Excerpt 27: Narrative produced by participant E4 towards the middle of the STPA intervention period (E4:15)*

- E4: Lank, lank gelede op 'n plaas het 'n boer en 'n tannie gebly.  
*Once upon a time on a farm there lived a farmer and an auntie.*  
 Hulle het 'n bok gehad.  
*They had a goat.*  
 Twee bokke en twee koeie en een perdjie en vyf hoendertjies en twee varkies.  
*Two goats and two cows and one little horse and five little chickens and two pigs.*  
 Die boer het vir die bokke elke dag op in die berge gaan loop.  
*Every day the farmer went to walk with the goats in the mountains.*  
 Het hy gaan loop.  
*He walked.*  
 En die tannie AS hy gaan loop het, het sy vir die hoenders gaan kos gee het.  
*And when he went walking the auntie gave the chickens food.*  
**Toe** die haan gekekkel het.  
*When the rooster cackled.*  
 En dan het hulle, die oom dié op die perdjie in die oggende gaan oopmaak en hom uitgebring en dat hy bietjie hardloop.  
*And then they, in the mornings the uncle opened up for the little horse and took him out so that he could run around a little bit.*  
 En net daar rond.  
*And just around there.*  
**Toe sien** hy die ding hierso, draadjie.  
*Then he saw the thing here, little piece of wire.*  
**MAAR toe sien** hy nie waar is die toue nie.  
*But then he did not see where the ropes were.*  
**Toe** hardloop hy binne hom vas.  
*Then he ran straight into him and got tangled.*  
 Toe hy hom **raak**, **toe** choke hy hom.  
*When he touched it, then it choked him.*

**Toe** val hy net.  
*Then he just fell.*  
**Toe** pass hy net daar uit.  
*Then he fainted just there where he was.*  
**Toe** hardloop die oom soontoe.  
*Then the uncle ran there.*  
**Toe** kom haal hy die karretjie.  
*Then he came to fetch the little car.*  
**Toe** tel hy hom op en sit hom in die karretjie.  
*Then he picked him up and put him in the little car.*  
Sit hy hom binne in die doctor's stalletjie vir die diere.  
*Put him inside the doctor's stable for animals.*  
**Toe** wag hy net TOT hy weer **wakker** word.  
*Then he just waited until he was awake again.*  
**Toe** loop hy.  
*Then he left.*  
En **toe** sit hy 'n tekenjie lat drade daar orals is.  
*And then he put up a sign that there were wires everywhere.*  
**Toe** het hy net die bokke gaan haal.  
*Then he just went to fetch the goats.*  
MAAR hy het vir hulle gefluit.  
*But he whistled to them.*  
**Toe** hoor hulle hom.  
*Then they heard him.*  
**Toe** klim hulle af.  
*Then they climbed off.*  
**Toe** is hulle weer binne in hulle, by hulle huis.  
*Then they were inside again in their, at their house.*  
**Toe** drink hulle daar water.  
*Then they drank water there.*  
En die een bok hy was stout gewees.  
*And the one goat was naughty.*  
**Toe** grou hy 'n gaatjie binne in die grond in.  
*Then he dug a little hole in the ground.*  
WANT hy hou nie van die plaas nie.  
*Because he does not like the farm.*  
**Toe** grou hy.  
*Then he dug.*  
**Toe** klim hy tot daar onder.  
*Then he climbed till there below.*  
**Toe** grawe hy nie diep genoeg nie.  
*Then he did not dig deep enough.*  
**Toe** val die hele ding.  
*Then the whole thing fell.*  
Die hele muur op hom.  
*The whole wall fell on him.*  
**Toe** val dit bo op hom.  
*Then it fell on top of him.*  
**Toe** het die ander bok sy maatjie gaan soek.  
*Then the other goat went looking for his little friend.*  
WANT hy hou nie van om alleen.  
*Because he does not like to alone.*  
**Toe** kry hy hom.  
*Then he found him.*  
Trek hy hom met sy horings so op.

*He pulled him up with his horns like this.*

**Toe** het hulle net weer net lat die toring weer lat bou lat die boer nie uitvind nie.

*Then they built up the tower again so that the farmer would not find out.*

WANT hy gaan hulle in die kraal, 'n klein plekkie laat sit.

*Because he is going to put them in the camp, put them in a little place.*

**Toe** maak hulle hom reg.

*Then they fixed it.*

**Toe** drink hulle vinnig net betyds die water **TOE** die oom daar aankom.

*Then they quickly drank water just in time when the uncle arrived.*

**Toe** die tannie die perdjie gaan kyk toe is hy nog nie wakker nie.

*Then the auntie went to check on the little horse then he was still not awake yet.*

**Toe** vat sy hom hospitaal toe.

*Then she took him to the hospital.*

**Toe** het hy hom.

*Then he had him.*

**Toe** het hy daar geslaap by die hospitaal.

*Then he slept there at the hospital.*

**Toe** het die tannie die varke gaan kos gee en die koeie gaan kos gee.

*Then the auntie went to give the pigs food and give the cows food.*

**TOE** sy daar kom, **toe** is dit aand.

*When she came there it was evening.*

**Toe** dit nag was het die boer gaan slaap.

*When it was night the farmer went to sleep.*

En die tannie.

*And the auntie.*

**Toe** het hulle geslaap.

*Then they slept.*

**Toe** het hulle net gehoor in die donker daar is 'n koei wat moo.

*Then in the dark they heard a cow what was bulking.*

En **toe** loop hy.

*And then he walked.*

**TOE** hy daar kom is daar 'n klein baba koeitjie.

*When he came there, there was a little baby cow.*

**Toe** is hy besig om melk te drink by die mamma.

*Then he was busy drinking milk from his mother.*

Hy gehardloop tot by die tannie.

*He ran to the auntie.*

**Toe** het hy die tannie gaan haal.

*Then he fetched the auntie.*

**Toe** het sy ook gaan kyk.

*Then she also went to look.*

**Toe** het sy hom gesien

*Then she saw him.*

**Toe** dit nou dag was.

*When it was daytime.*

**Toe** ry hy in die kar tot by die perdjie.

*Then he drove in the car to where the little horse was.*

**TOE** hy daar kom is die perdjie wakker.

*When he came there the little horse was awake.*

En hy is gesond.

*And he is healthy.*

**Toe** klim hy op die perdjie.

*Then he climbed on the little horse.*

**Toe** is die perdjie binne in die karretjie-dingetjie.

*Then the little horse was inside the little car thing.*



**Toe** ry die boer met die perdjie terug.  
*Then the farmer drove back with the little horse.*  
**Toe** het die boer met die perdjie.  
*Then the farmer with the little horse.*  
 Nou het hy **gedink**.  
*Then he thought.*  
**Toe** sit hy 'n toutjie om hom SODAT hy hardloop so reg rondom die plek.  
*Then he put a little rope around him so that he could run around the place.*  
**Toe** het hy gehardloop.  
*The he ran.*  
 Dit is die einde!  
*That is the end!*



*Figure 17: Sandworld created by E4 towards the end of the STPA intervention period*

*Excerpt 28: Narrative produced by participant E4 towards the middle of the STPA intervention period (E4:17)*

- E4: Lank, lank gelede het die boer en 'n vrou op 'n plaas gewerk met allerhande diere.  
*Once upon a time a farmer and a woman worked on a farm with all sorts of animals.*  
 Hulle twee perdjies gehad, 'n mannetjie en 'n vroultjie.  
*They had two little horses, a male and a female.*  
 En die tannie het 'n katjie.  
*And the auntie has a little cat.*  
 En die oom het 'n poedel gehad.  
*And the uncle has a poedel.*  
 En elkeen het ietsie gehad **wat hulle aan elke kant doen.**  
*And they each had something that they did on each side.*  
 Die oom het toe vir die bokke gaan kos gee saam met die hond.  
*The uncle went to give the goats food and the dog went along.*  
**Toe** het hy vir die bokke kos gegee.  
*Then he gave the goats food.*  
 En hy het vir die ganse gaan kos gee.

*And he went to give the geese food.*  
 En die hoenders se eiers gaan haal.  
*And took out the chickens' eggs.*  
 Hy het geloop.  
*He walked.*  
**Toe sien** hy hase **wat sy klein diertjies opeet.**  
*Then he saw rabbits that were eating his little ones.*  
**Toe** het hy die hond gaan haal, sy kwaai hond.  
*Then he went to fetch his dog, his vicious dog.*  
**Toe** jaag die hond die diertjies weg.  
*Then the dog chased the little animals away.*  
**Toe** het hy gaan kyk.  
*Then he went to look.*  
**Toe** het dit twee hasies!  
*Then it was two little rabbits!*  
**Toe** het hy gaan bok melk.  
*Then he went to milk the goat.*  
**Toe** het hy die koeie gaan melk.  
*Then he went to milk the cow.*  
 Hy het dit gaan melk!  
*He went to milk it!*  
 MAAR die mamma, die een met die melk, **wil** nie opstaan nie.  
 But the mother, the one with the milk, did not want to stand up.  
**Toe kom** hy **agter** sy het in 'n... getrap.  
*Then he realized that she has tramped in a...*  
 WANT daar was leeus gewees, ok.  
*Because there were lions, ok.*  
**Toe** het sy in een van dit getrap, 'n leeu-trap.  
*Then she tramped in one of those, a lion trap.*  
**Toe** kry hy hom nie af nie.  
*Then he could not get it off.*  
**Toe** het hy dié oom met die tractor gebel.  
*Then he phoned this man with the tractor.*  
**Toe** het hy gery.  
*Then he drove.*  
**Toe** het hy die koei gevat.  
*Then he took the cow.*  
 Die koei op die trailor gesit.  
*Put the cow on the trailer.*  
**Toe** het hulle hom in die hospitaal gesit.  
*Then they put him in the hospital.*  
**Toe** het dit gereën.  
*Then it rained.*  
**Toe** is die nag.  
*Then it was night.*  
**Toe** het dit gereën!  
*Then it rained!*  
**Toe** hy sien dit reen.  
*Then he saw it was raining.*  
**Toe** hardloop hy terug plaas toe.  
*Then he ran back to the farm.*  
**Toe** het hy sy hond ge gaan haal.  
*Then he went to fetch his dog.*  
**Toe** het hulle in die huis gejaag.  
*Then they raced into the house.*



**Toe** het hulle daar in die huis gebly TODAT dit klaar gereën het.  
*Then they stayed in the house till the rain had stopped.*  
**Toe** het die tannie die katjie.  
*Then the auntie had the cat.*  
 Was met die reën raak gegooi.  
*Was hit by the rain.*  
 Hy was raak.  
*He was hit.*  
 En die weerlig het hom geslaan.  
*And the lightning struck him.*  
**Toe** het hy net die katjie gesond gemaak.  
*Then he just healed the little cat.*  
 WANT hy het vir hulle medisyne.  
*Because he had medicine for them.*  
 Het hy hom reg gemaak.  
*He made him better.*  
**Toe** is dit die einde.  
*Then it was the end.*

### 5.3.5. Concluding summary of Section B: The progress over 6 weeks of intervention

Despite MLUw scores for all the experimental group participants being fairly consistent throughout the participants' three example narratives, the structural complexity improved over the 6 weeks of STPA narrative intervention. For example, participant E1 initially produced a very short and simple story (2 utterances comprising 17 words in total, with no conjunctions, no conjunctive adverbs and no embedding). By the middle and end narratives, however, he was producing more words; utterances; conjunctive adverbs; and relative clauses. Participants E2, E3 and E4 were also initially using short sentences and a limited number of utterances, but by the end of the study they were also producing more words; utterances; conjunctive adverbs; subordinating and co-ordinating conjunctions; relative clauses, and other embedded clauses. During the baseline narratives, participants E1, E2 and E4 did not produce any internal state terms. Only participant E3 produced two internal state terms in his first narrative. Overall, the use and variety of internal state term types increased for all participants during the STPA intervention sessions: By the middle and end STPA narratives, participants E1, E2 and E4 started including internal state terms in their narratives, and participant E3 increased his use of internal state terms.

Additionally, these results indicate that the experimental participant group showed improvements in all areas of structural complexity that were targeted during the STPA narrative intervention sessions (viz. number of words; number of utterances and the conjunctive adverb (*toe* 'then')). The participants furthermore made use of significantly more

internal state terms, which were also encouraged during the STPA intervention sessions. These results show that the STPA can facilitate improvement in narrative abilities of Grade 3 learners. The amount of improvement will depend on the duration of the therapy program, the linguistic concepts that are taught during the mini sessions, and the manner in which the sessions are structured and adapted to suit the individual participant's narrative development needs.

## **Chapter 6: Conclusion**

### **6.1. Introduction**

This chapter serves to answer the research question, namely what changes in narrative skills (if any), measured in terms of micro and macro structure, were brought about by the Sandtray Play Approach (STPA) in L1 Afrikaans-speaking Grade 3 learners with specific learning disability (SLD). As such, Chapter 6 provides a conclusive summary of findings that were discussed in depth in Chapter 5. This summary specifically pertains to an amalgamation of results from section A of Chapter 5 (the LITMUS: MAIN-Afrikaans pre- and post-intervention assessment results) and section B (the participants' progress over 6 weeks of STPA intervention sessions). The findings of the study are compared to current and relevant literature on narrative development as well as Sandtray literature that was discussed in Chapter 2. This chapter also sets out the limitations of the study (section 6.3). Despite these limitations, the results have implications for further research into narrative skills of children and for speech-language therapy; these are briefly discussed in sections 6.4 and 6.5, respectively.

### **6.2. Summary and discussion of results**

In terms of story structure, in other words the participants' use of story grammar components during the pre- and post-test LITMUS: MAIN-Afrikaans, the experimental group had improved more than the control group. In terms of structural complexity, the post-test results indicate that the experimental group participants used slightly more complete episodes than did the control group participants. The quantity of language (measured in MLUw) remained fairly consistent from pre- to post-testing. Similar results were found for the STPA narrative analysis. In both the LITMUS: MAIN-Afrikaans pre- and post-test narratives and the selected STPA narratives, the experimental group's number of words and utterances however increased, whereas those of the control group decreased from the pre to the post-test. By the end of the study, the experimental group participants were thus producing longer and more complex stories than the control group participants. Similarly, the amount of language produced by the experimental group participants during narrative production increased over the course of 6 weeks' STPA intervention. As mentioned in Chapter 2, a study conducted by

Rice et al. (2010) indicated that the MLUw for typically developing learners aged 8 years and 6 months to 8 years and 11 months is 5.0, whereas the learners with SLD in the same age range had a MLUw of 4.5. In both the pre- and post-test of the current study, all participants demonstrated a MLUw longer than that of the learners in Rice et al.'s (2010) study, i.e., a MLUw of more than 5.0, despite having SLD.<sup>12</sup> As mentioned previously in Chapter 2, a study by Fey et al. (2004) indicated that learners with SLD produced short narratives, lacking in terms of number of words used. The improvements seen in the number of words and utterances of the experimental group participants after attending STPA sessions indicates that the STPA can therefore possibly be considered to be effective in assisting learners with SLD to improve their number of words and utterances used in their narratives.

In terms of additional structural complexity calculations during the LITMUS: MAIN-Afrikaans data, there was a very low frequency usage of conjunctive adverbs, subordinating and co-ordinating conjunctions, relative clauses, and other embedded clauses in both the experimental and control group. There was thus no notable difference in structural complexity between the two groups. However, when comparing the STPA narrative samples for each experimental group participant, structural complexity improved over the course of the intervention. For example, by the end of the study, all experimental group participants were producing more conjunctive adjectives, relative clauses, and other embedded clauses than in their first STPA narrative. Only participant E1 was not yet using subordinating or co-ordinating conjunctions in his STPA narratives by the end of the study.

With regard to internal state terms in the pre- and post-test LITMUS: MAIN-Afrikaans narratives, the experimental group on average produced more internal state terms in their post-test than their pre-test, whereas the control group results remained fairly constant. This indicates that the STPA can make a difference to participants' use of internal state terms. If the STPA approach is able to assist children with SLD to improve their use of internal state terms the question arises as to how much (more) this approach can then help typically developing Grade 3s to learn these skills? As referred to in Chapter 2, a study by Acker (2012) on the narrative development skills of typically developing children indicated that few typically developing Grade 3 learners made use of internal plan statements. At the start of the

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<sup>12</sup> One should bear in mind that MLU can vary considerably across studies depending on how it was calculated and that this makes a direct comparison of MLU across studies difficult.

STPA sessions, participants did not produce any (or only very few) internal state terms. This was in accordance with Acker's (2012) findings for typically developing Grade 3s. As the STPA intervention sessions progressed, it was, however, found that all the experimental group participants began to increasingly make use of internal state terms in their narratives.

In terms of comprehension, the experimental group participants showed more improvement than the control group when comparisons were drawn between LITMUS: MAIN-Afrikaans pre- and post-testing. As mentioned in Chapter 2, several factors could influence a learner's comprehension and narrative creation abilities – for example, his/her learning style could influence progress in this aspect (Bernat & Gvozdenko, 2005). In order to employ the STPA intervention processes successfully, I needed to bear in mind each individual participant's learning style, in accordance with what Gardner and Korth (1998) found. In addition to learning style differences, sensory modality (visual, auditory, kinetic) preference could also affect how children learn to create oral narratives (Gardner & Korth, 1998). Whilst interacting with the participants in this study, my personal experience was in accordance with what Bernat and Gvozdenko (2005) note about the importance of taking each learner's personality, motivation, and emotional and cultural factors into consideration. For example, participant E1's behaviour was not always conducive to learning, and emotional turmoil at his home appeared to add to his behavioural problems. He struggled, more than the other participants, to spontaneously produce narratives, but he produced insightful answers when questions were asked about his stories. He appeared to be more of a visual learner than a kinetic learner. For example, he acted more confidently and fared better at telling narratives from 2D sequence cards (LITMUS: MAIN-Afrikaans pre and post-test) than he did when creating narratives from 3D Sandworld creations. I made a point of taking his individual needs and strengths into consideration, despite all his challenges, and his use of story structure components and internal state terms improved by the end of the STPA study, as did his story comprehension. The number of words and number of utterances he used in his stories also increased.

Overall, it appeared that the STPA did make a difference to the experimental group's use of story structure components, internal state terms, number of words, and number of utterances. Additionally, the STPA appears to facilitate comprehension and learning in multiple areas of structural complexity – for example, in the use of adverb conjunctions; subordinating and co-ordinating conjunctions; and embedding. Considering that these improvements occurred over

a short period of 6 weeks, it would be interesting to see if a longer intervention period could render further improvements in narrative skills.

During this study, I adapted the STPA (Smith, 2012) and I focussed on training and encouraging the experimental participant group to use and understand story grammar components such as the beginning, middle and end of a story. I also modelled and encouraged the experimental group to understand the use of internal state terms through comprehension questions. In accordance with the STPA (Smith, 2012), the listeners were instructed to ask each other questions after each Sandworld was built. I then additionally asked questions containing internal state terms to give the participants exposure to such terms. Throughout the STPA intervention period, I encouraged the experimental group participants to tell longer stories that had a conclusion, taught them new words and often corrected their vocabulary. I also encouraged them to use the conjunctive adverb (*toe* 'then') to add continuity to their stories. As discussed previously, results indicate that the experimental participant group showed improvements in all the areas that I targeted directly. These results lead me to conclude that the STPA can enhance concept development and can be adapted to suit individual participant's narrative development needs.

### **6.3. Limitations of the study**

Possible limitations were identified during the study. These included the short duration of the study (6 weeks), which may have limited the measurable overall progress made by the experimental group participants. Should the duration of the study have been longer, the results obtained may have been more representative of the STPA's potential for use in overall narrative skill development. Other potential limitations were the small sample size and that no female participants were included in the study. The obtained results are not generalizable to all children with SLD, and the inclusion of both genders could have rendered different study results.

Six of the eight participants in the study were also receiving speech-language therapy from other therapists. Despite asking my colleagues not to focus on narrative skills for the 6 weeks of my study, I am unsure of what linguistic skills each Speech-Language Therapist (SLT) was targeting during her individual therapy sessions. Therefore, the effect of speech-language

therapy sessions by other therapists could also have had an influence on the end results obtained by the participants in both the experimental and control groups for the LITMUS: MAIN-Afrikaans post-test.

The experimental group participants could furthermore have had an advantage over the control group participants during the post-test LITMUS: MAIN-Afrikaans, because the former group were accustomed to working with me and appeared confident during their assessments where they were required to interact with me during their storytelling. The participants in the control group did not have this advantage of frequently interacting and communicating with me. The experimental group participants may have been more motivated to tell stories during their post-test LITMUS: MAIN-Afrikaans assessments, because they had acquired skills during the STPA sessions that they might have wanted to put to use during the LITMUS: MAIN-Afrikaans storytelling.

Lastly, the participants' individual learning style preferences could have had an influence on their overall performance. As explained in section 2.7.2.5, the LITMUS: MAIN-Afrikaans pre- and post-test involved telling stories by looking at two dimensional sequence cards. Participants who favoured kinetic tasks over visual tasks may have performed less successfully on these tasks. Similarly, experimental group participants who favoured visual tasks over kinetic tasks may not have performed to their true ability during the STPA intervention sessions.

#### **6.4. Implications for speech-language therapy**

No studies on the use of the STPA in speech-language therapy in South Africa could be traced. As such, this Master's project has generated novel information and therapeutic guidelines for speech-language therapy. Based on the results of this study, the STPA appears to be a useful tool for SLTs to teach learners storytelling and narrative comprehension skills. These findings are in accordance with Smith (2012) who found that this 'hands on' approach gave learners with SLD communication and academic empowerment through the means of storytelling.



## **6.5. Implications for further research**

Another component to the STPA (Smith, 2012) is teaching writing skills through story telling in the sandtray context. This could be yet another new avenue to pursue as a follow-up to the present study. For example, an additional study could include an appropriate pre-test for writing skills followed by a series of STPA narrative intervention sessions. Thereafter, a post-test for writing skills could determine whether or not the STPA would be beneficial for school-based SLTs to incorporate into their therapy programmes to encourage development in literacy skills within mainstream and special needs classrooms. Such a study will facilitate further links between teaching and speech-language therapy practice.

## **6.6. Concluding remarks**

This study has reminded me that play is a valuable tool for success in therapy. I was amazed to see how tirelessly and enthusiastically the young participants in this study enjoyed playing with the miniature figurines in the sand. They were in their own imaginary Sandworlds, creating and interacting actively with the characters in their stories. The participants' stories were so vivid that by the end of this journey I too began "To see a World in a grain of sand..." (William Blake, 1917).

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**APPENDIX 1****Table listing SLPAL narrative skill assessment strategy suggestions from SLPs**

<b>Assessment tool</b>	<b>No. of responses</b>	<b>SLP locations</b>	<b>Response dates</b>
<i>Test of narrative language</i> (TNL) (Gillam & Pearson, 2004)	7	Toronto; California; Seattle; New York; Spain; Sydney; Washington	29/30/31 March 2014
<i>Narrative language measure</i> (NLM) (Peterson & Spencer, 2012)	7	Toronto; California; Seattle; New York; Spain; Sydney; Washington	29/30/31 March 2014
<i>Expressive, reception and recall instrument</i> (ERRNI) (Bishop, 2004)	1	Washington	29 March 2014
<i>Assessment of comprehension and expression 6–11</i> (ACE: 6–11) (Adams et al., 2001)	1	Washington	29 March 2014
<i>Bus story</i> (Renfrew, 1997)	3	Washington; Tasmania; Toronto	29 March 2014
<i>Emerging language and literacy assessment</i> (ELLA) (Wiig & Secord, 2006)	1	Georgia	29 March 2014
<i>Squirrel story</i> (Carey, Allan & Leitao, 2006) & <i>Peter and the cat</i> (Allan & Leitao, 2013)	3	Barbados; Sydney; Washington	29 March 2014

**APPENDIX 2****Table listing of SLPAL narrative skill intervention strategy suggestions by SLPs**

<b>Intervention strategy</b>	<b>No. of responses</b>	<b>SLP locations</b>	<b>Response date</b>
<i>Braidy the storybraid</i> (Moreau, 2013)	11	Vancouver x 2; Ontario; Nevada x 2; Toronto; Brooklyn; New York; New Jersey; Amora; North Country	29 March 2014
<i>Story grammar marker</i> (SGM) (Moreau, 2013)	11	Vancouver x 2; Ontario; Nevada x 2; Toronto; Brooklyn; New York; New Jersey; Amora; North Country	29 March 2014
<i>Talk to write, write to learn</i> (TTW, WTL) (Moreau, 2013)	11	Vancouver x 2; Ontario; Nevada x 2; Toronto; Brooklyn; New York; New Jersey; Amora; North Country	31 March 2014
<i>Theme maker</i> (Moreau, 2013)	11	Vancouver x 2; Ontario; Nevada x 2; Toronto; Brooklyn; New York; New Jersey; Amora; North Country	30 March 2014
<i>Story champs</i> (Peterson & Spencer, 2010)	8	Vancouver; Nevada; Toronto; Brooklyn; New York; New Jersey; Amora; North Country	31 March 2014
<i>Speaking and listening through narrative</i> (Shanks, 2011)	4	Amora; Toronto; Nevada; Washington	29 March 2014
<i>Comic strip conversations</i> (CCS) (Gray, 1994)	2	Vancouver & Nevada	29 March 2014
<i>The story wheel</i> (Byrne, 2011)	1	Los Angeles	31 March 2014
<i>Rory's story cubes</i> (O'Connor, 2005)	1	Los Angeles	31 March 2014

### APPENDIX 3

#### Letter to principal requesting permission to collect data at his school

3 February 2014

Dear Headmaster

#### REQUEST TO GAIN DATA FOR MY RESEARCH PROJECT IN MY SCHOOL CONTEXT

I am a Speech-Language Therapist at XXX School. I am currently pursuing a Masters in General Linguistics in correspondence with Stellenbosch University.

My topic will be: An exploration of the Sand Tray Approach for narrative skills development in first language Afrikaans speaking Grade 3 Learners with specific learning disability.

For my project, I have chosen to work with Grade 3 learners whose first language is Afrikaans. I will be using a new multi-sensory teaching approach to teach storytelling and comprehension skills. This project involves stimulating learners' storytelling and comprehension by means of creating stories in a sand tray context. This approach will be incorporated into the therapy program within school hours. Therapy sessions will be in consultation with the class teacher and will not entail any extra costs to the school or to the parents/guardians. The therapy sessions will merely enrich the therapy already offered to the learners.

I will require permission from the learners' parents/guardians to use my findings in my Masters Study. I will send consent forms to all parents/guardians whose children I would like to invite to be part of the project. The learners will remain anonymous and no harm will be caused.

The parent/guardian will be at liberty to withdraw his or her child from the project at any time, should they so desire. The findings from this project will potentially benefit Speech-Therapy research and the learners at our school through creating new therapy methods to teach learners narrative and comprehension skills.

Your **written** permission to conduct my project at XXX School would be much appreciated. Once such permission has been granted, I will apply for ethical clearance for the research project from the Ethics Committee (Humanoria) at Stellenbosch University. If you have any questions regarding the project, you are welcome to contact me (XXX; XXX) or my study leader (Dr Frenette Southwood: XXX; XXX).

Yours Sincerely,

---

Louise Saaiman

SPEECH-LANGUAGE THERAPIST

## APPENDIX 4

### Letter to teacher requesting permission to involve her learners in the study

3 February 2014

Dear Teacher of Grade 3B

#### REQUEST TO GAIN DATA FOR MY RESEARCH PROJECT IN MY SCHOOL CONTEXT

I am a Speech-Language Therapist at XXX School. I am currently pursuing a Masters in General Linguistics in correspondence with Stellenbosch University.

For my project, I request to work with your Grade 3 Afrikaans first language speaking learners. I will be using a new multi-sensory teaching approach to teach storytelling and comprehension skills. Your Learners' storytelling and comprehension will be stimulated by means of creating stories in a sand tray context. This new and exciting activity will be incorporated into the therapy programme at no extra cost to the learners or to the school. Your learners will remain anonymous and no harm will be caused.

Permission to gain data from your learners for my research would be much appreciated. Once such permission has been granted, I will apply for ethical clearance for the research project from the Ethics Committee (Humanoria) at Stellenbosch University. If you have any questions regarding the project, you are welcome to contact me (XXX; XXX) or my study leader (Dr Frenette Southwood: XXX; XXX).

Please fill in the consent form below and return it to me.

Yours Sincerely

---

Louise Saaiman

SPEECH-LANGUAGE THERAPIST

✂-----  
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I, \_\_\_\_\_ hereby confirm that I have understood the contents of this document and **(give/do not give)** Louise Saaiman permission to involve my grade 3 Learners in her research and to gain and use the information gathered for her Masters project. I understand that I am at liberty to withdraw my Learners from the project at any time, should I so desire.

---

TEACHER OF 3B

---

DATE



## APPENDIX 5

### Informed assent form for participants

	UNIVERSITEIT STELLENBOSCH
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## INLIGTINGSTUK EN TOESTEMMINGSVORM VIR DEELNEMERS



### NAAM VAN DIE NAVORSINGSPROJEK:

‘n Verkenning van die Sandbakspeltegniek vir die ontwikkeling van storievertelvermoëns in Graad 3 eerstetaal- Afrikaanssprekende leerders met spesifieke leergestremdhede.

**NAVORSER(S) SE NAAM:** Mev. Louise Saaiman

**ADRES:** 91 XXXsingel  
XXX  
9XXX

**KONTAKNOMMER:** XXX

### Wat is NAVORSING?

Navorsing is iets wat ons doen om MEER TE LEER oor hoe dinge (en mense) werk. Ons gebruik navorsingsprojekte of -ondersoeke om meer uit te vind oor kinders en tieners en die dinge wat hulle lewe beïnvloed, soos hulle skool, hulle gesin en hulle gesondheid. Ons doen dit omdat ons die wêreld ’n beter plek probeer maak.

### Waaroor gaan hierdie navorsingsprojek?

Ek nooi jou uit om iets lekkers te probeer om te sien of dit jou kan leer hoe om stories te vertel en verstaan. Indien jy instem om aan hierdie studie deel te neem, sal jy die geleentheid kry om stories in ’n sandbak te bou. Hierdie nuwe en opwindende aktiwiteit sal in skooltyd in my terapie kantoor plaasvind. Die aktiwiteit sal ongeveer ses weke duur. Die skoolhoof, mnr. XXX, en jou klasonderwyseres, me. XXX, het hul toestemming vir en ondersteuning aan die projek verleen.

### **Hoekom vra julle my om aan hierdie navorsingsprojek deel te neem?**

Ek het jou gekies as verteenwoordiger vir dié studie omdat ek wil weet of my nuwe terapiemetode sal help om storievertel aan te leer vir leerders, soos jy, wat in Graad 3 is en wat eerste taal Afrikaanssprekend is.

### **Wie doen die navorsing?**

Ek is mev. Louise Saaïman, een van die spraak terapeute by jou skool (XXX Skool). Ek wil graag hierdie projek doen om te sien of ek nie, deur pret en storievertel in die sandbak, vir kinders soos jy kan help om stories te leer vertel nie.

### **Wat sal ek moet doen as ek aan die studie deelneem?**

Al wat belangrik is, is dat jy pret sal hê terwyl jy stories met figuurtjies bou in 'n sandbak. Nadat jy jou storie gebou het, gaan jy vir my en jou maatjies in die groep jou storie vertel. Daar is geen regte of verkeerde idees nie. Gebruik net jou verbeelding. Ek gaan jou storie op 'n oudiobandopnemer opneem. Daarna gaan ek jou storie op my rekenaar tik.

### **Is daar enigiets wat kan verkeerd gaan?**

Daar is geen identifiseerbare risiko's verbonde aan deelname aan hierdie studie nie. Sandbakspel is veronderstel om net pret, leersaam en onbedreigend te wees. Indien jy dalk met enigiets ongemaklik sou voel tydens die terapieprogram, het jy die keuse om daaroor te praat of te onttrek van die program sonder om redes te verskaf. Niemand sal vir jou kwaad wees as jy nie meer wil deelneem nie.

### **Watter goeie dinge kan met my gebeur as ek aan die projek deelneem?**

Daar is 'n moontlikheid dat hierdie storievertelterapie, die proses hoe jy stories bou in die sandbak en dan vertel, vir jou sal help om oor die algemeen stories beter te vertel. Dit is baie belangrik dat kinders leer hoe om stories te vertel. As jy stories kan vertel, kan jy beter kommunikeer met jou maats en daar is 'n groter moontlikheid dat jy beter sal doen met lees en skryf in jou klas. As hierdie terapie vir jou help om stories te vertel dink net hoe kan dit vir ander kinders in die skool help wat ook sukkel om stories te vertel.

### **Sal ander mense weet ek neem aan die projek deel?**

Ja, jou klasjuffrou en jou klasmaats sal weet dat jy deelneem aan iets omdat hulle sal sien hoe jy en die ander maats saam die klas verlaat om na my toe te gaan. Maar alles wat julle vir my vertel, sal vertroulik gehou word. Net ek, my studieleier (dr. Southwood) en mnr. XXX sal toegang hê tot alle inligting en julle stories.

### **Met wie kan ek oor die projek gesels?**

As jy enige vrae of besorgdheid omtrent die projek het, kontak gerus vir mev. Louise Saaïman (XXX; XXX; XXX Skool, Spraak- en Taalterapiedepartement, 91 XXXsingel, XXX, 9XXX) of dr. Frenette Southwood (studieleier:XXX; XXX ).

### **Wat gebeur as ek nie wil deelneem nie?**

Jy mag self besluit of jy aan die studie wil deelneem of nie. Al sou jy en jou ouers al toestemming gegee het dat jy aan die studie deelneem, kan jy te eniger tyd daaraan onttrek sonder enige nadelige gevolge. Niemand sal kwaad vir jou as jy nie meer wil deelneem nie. Laat weet my net vroegtydig as jy nie meer wil deelneem nie en voel asseblief vry om enige probleme met my te bespreek. Jou redes en bekommernisse sal vertroulik gehanteer word. Ek mag jou ook van die studie te onttrek as jy nie jou volle samewerking wil gee nie, oor-emosioneel is, ander deelnemers steur of as jy skade probeer aanrig in die sessies.

Verstaan jy waarom hierdie navorsing gaan, en sal jy aan die projek deelneem?

JA

NEE

Het die navorser ál jou vrae beantwoord?

JA

NEE

Verstaan jy dat jy kan OPHOU deelneem net wanneer jy wil?

JA

NEE

---

Kind se naam en van

---

Kind se handtekening

---

Datum

## APPENDIX 6

### Informed consent form for the parents of the participants in the experimental group



UNIVERSITEIT•STELLENBOSCH•UNIVERSITY  
jou kennisvenoot • your knowledge partner

#### UNIVERSITEIT STELLENBOSCH INWILLIGING OM DEEL TE NEEM AAN NAVORSING VIR EKSPERIMENTELE STUDIE DEELNEMERS

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#### **‘n Verkenning van die Sandbakspeltegniek vir die ontwikkeling van storievertelvermoëns in Graad 3 eerstetaal- Afrikaans sprekende leerders met spesifieke leergestremdhede.**

U kind word uitgenooi om deel te neem aan 'n navorsingstudie wat uitgevoer gaan word deur mev. Louise Saaiman (Spraak-taalterapeut) by XXX Skool en dr. Frenette Southwood (Studieleier) van die Departement Algemene Taalwetenskap aan die Universiteit Stellenbosch. U kind is as moontlike deelnemer aan die studie gekies omdat hy Afrikaanssprekend is, in Graad 3 is en volgens sy spraak-taalterapeut en/of klasonderwyseres met storievertelvaardighede sukkel.

#### **DOEL VAN DIE STUDIE**

Die studie wil vasstel of die Sandbakspeltegniek (Smith, 2012) geskik is om vir Afrikaanssprekende leerders met leergestremdheid storievertelvaardighede aan te leer.

#### **PROSEDURES**

Indien u toestem dat u kind aan hierdie studie deelneem, vra ons dat u vir mev. Saaiman sal toelaat om 'n nuwe multi-sensoriese benadering te gebruik om vir u kind te onderrig in storievertel- en begripsvaardighede. U kind se storievertelvermoë en -begrip sal twee keer per week (gemiddeld 1.5 ure in totaal per week) gestimuleer word deur die skep van stories in 'n sandbakkonteks. Die tegniek word die "Sandbakspeltegniek van Smith (2012)" genoem. Hierdie nuwe en opwindende aktiwiteit sal in skooltyd en in mev. Saaiman se terapiekantoor plaasvind. Die aktiwiteit sal ongeveer ses weke duur. Die skoolhoof, mnr. XXX, en die klasonderwyseres, me. XXX, het hul toestemming vir en ondersteuning aan die projek verleen.

#### **MOONTLIKE RISIKO'S EN ONGEMAK**

Daar is geen identifiseerbare risiko's verbonde aan deelname aan hierdie studie nie. Sandbakspel is veronderstel om net pret, leersaam en onbedreigend te wees. Indien u kind dalk met enigiets ongemaklik sou voel tydens die terapieprogram, het hy die keuse om daaroor te praat of homself te ontrek van die program sonder om redes te verskaf.

## **MOONTLIKE VOORDELE VIR DEELNEMERS EN/OF VIR DIE SAMELEWING**

Daar is 'n moontlikheid dat die Sandbakspeltegniek vir leergestremde leerders, soos u kind, sal help om storievertelvaardighede aan te leer. Storievertelvaardighede is noodsaaklik vir alledaagse kommunikasiesukses asook vir lees- en skryfbemagtiging en -ontwikkeling.

Die resultate van hierdie studie het ook die potensiaal om baanbrekend te wees vir ons skoolterapie- en onderwysbenaderings asook vir die professie van spraak-taaltherapie in terme van die kweek van storievertelvaardighede in leerders met leergestremdhede.

## **VERGOEDING VIR DEELNAME**

Daar sal geen geldelike vergoeding wees vir die deelnemers aan hierdie studie nie. Vergoeding sal wees in die vorm van ekstra taal- en storievertelstimulasie wat vir u kind aangebied sal word tydens skoolure. Deelname aan die studies al u ook niks ekstra kos nie.

## **VERTROULIKHEID**

Enige inligting wat deur middel van die navorsing verkry word en wat met u kind in verband gebring kan word, sal vertroulik bly en slegs met u toestemming bekend gemaak word of soos deur die wet vereis. Daar sal 'n klankopname gemaak word van alle stories wat u kind vertel tydens die terapiessessies (sodat die stories later deur mev. Saaiman getranskribeer kan word) en foto's van die voltooië sandbakstories sal met 'n digitale kamera geneem word. Die opnames, transkripsies en foto's sal vir vyf jaar ná die studie in 'n geslote kas veilig gehou word. Net dr. Southwood, mnr. XXX en mev. Saaiman sal magtiging hê om die data te bestudeer. Ná vyf jaar sal die klankopnames vernietig word. U kind se gesig sal nie op die foto's verskyn nie en 'n skuilnaam sal verder verseker dat sy identiteit heeltemal anoniem gehou word. Mev. Saaiman beplan om haar navorsing in vakwetenskaplike tydskrifte te publiseer en by konferensies voor te dra, maar die data sal op so 'n manier aangebied word dat u kind nie herkenbaar sal wees nie.

## **DEELNAME EN ONTTREKKING**

U kind mag self besluit of hy aan die studie wil deelneem of nie. Indien hy inwillig om aan die studie deel te neem kan hy te eniger tyd daaraan onttrek sonder enige nadelige gevolge. Hy kan ook weier om bepaalde vrae te antwoord, maar steeds aan die studie deelneem. Mev. Saaiman mag u kind van die studie onttrek indien omstandighede dit noodsaaklik maak, byvoorbeeld sou u kind se gedrag of gemoedstoestand die studie of die deelname van ander deelnemers negatief beïnvloed of sou dit blyk dat u kind nie deelname aan die aktiwiteite geniet nie.

## **IDENTIFIKASIE VAN ONDERSOEKERS**

Indien u enige vrae of besorgdheid omtrent die navorsing het, staan dit u vry om in verbinding te tree met mev. Louise Saaiman (XXX; XXX; XXX, Spraak- en Taaltherapiedepartement, 91 XXXsingel, XXX, 9XXX ) of dr. Frenette Southwood (studieleier: XXX; XXX).

## **REGTE VAN DEELNEMERS**

U kan te eniger tyd u inwilliging terugtrek en u kind se deelname beëindig, sonder enige nadelige gevolge vir u of u kind. Deur deel te neem aan die navorsing doen u geensins afstand van enige wetlike regte, eise of regsmiddel nie. Indien u vrae het oor u regte as proefpersoon by navorsing, skakel asb. met me. Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] van die Afdeling Navorsingsontwikkeling.

<b>VERKLARING DEUR DIE DEELNEMER SE REGSVERTEENWOORDIGER (OUER/VOOG)</b>
--

Die bostaande inligting is aan my, \_\_\_\_\_  
(ouer/voog se naam en van), gegee en verduidelik deur mev. Louise Saaiman, in Afrikaans en ek is dié taal magtig. Ek is die geleentheid gebied om vrae te stel en my vrae is tot my bevrediging beantwoord.

Ek \_\_\_\_\_ (ouer/voog se naam en van) willig hiermee vrywillig in dat my kind \_\_\_\_\_ (kind se naam en van) deel neem aan die studie. Ek gee hiermee my toestemming dat hy aan die studie mag deelneem. 'n Afskrif van hierdie vorm is aan my gegee.

_____	_____
<b>Naam en van van deelnemer (<i>leerder</i>)</b>	<b>Handtekening</b>

_____	_____
<b>Naam en van van regsverteenvoordiger (<i>ouer/voog</i>)</b>	<b>Handtekening</b>

\_\_\_\_\_

**Datum**

<b>VERKLARING DEUR ONDERSOEKER</b>
------------------------------------

Ek verklaar dat ek die inligting in hierdie dokument vervat verduidelik het aan \_\_\_\_\_ (naam van die *leerder*) en sy regsverteenvoordiger \_\_\_\_\_ (naam van die *regsverteenvoordiger (ouer/voog)*). Hy/sy is aangemoedig en genoeg tyd gegee om vrae aan my te stel. Dié gesprek is in Afrikaans gevoer en geen vertaler is benodig nie.

_____	_____
<b>Handtekening van ondersoeker (Mev. L. Saaiman)</b>	<b>Datum</b>

## APPENDIX 7

### Informed consent form for the parents of the participants in the control group



UNIVERSITEIT•STELLENBOSCH•UNIVERSITY  
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#### UNIVERSITEIT STELLENBOSCH INWILLIGING OM DEEL TE NEEM AAN NAVORSING VIR KONTROLE STUDIE DEELNEMERS

---

#### **‘n Verkenning van die Sandbakspeltegniek vir die ontwikkeling van storievertelvermoëns in Graad 3 eerstetaal- Afrikaans sprekende leerders met spesifieke leergestremdhede.**

U kind word uitgenooi om deel te neem aan ’n navorsingstudie wat uitgevoer gaan word deur mev. Louise Saaiman (Sprak-taalterapeut) by XXX Skool en dr. Frenette Southwood (Studieleier) van die Departement Algemene Taalwetenskap aan die Universiteit Stellenbosch. U kind is as ’n kontrolegroepdeelnemer aan die studie gekies omdat hy Afrikaanssprekend is, in Graad 3 is en volgens sy spraak-taalterapeut en/of klasonderwyseres met storievertelvaardighede suksel.

#### **DOEL VAN DIE STUDIE**

Die studie wil vasstel of die Sandbakspeltegniek (Smith, 2012) geskik is om vir Afrikaanssprekende leerders met leergestremdheid storievertelvaardighede aan te leer.

#### **PROSEDURES**

Indien u toestem dat u kind as ’n kontrolegroepdeelnemer aan hierdie studie deelneem, vra ons dat u vir mev. Saaiman sal toelaat om voor- en na-toetse met u kind uit te voer, ses weke uitmekaar. Die toetse sal verg dat u kind na ’n reeks prente sal kyk en dan ’n storie daarvoor vertel. Indien dié navorsingstudie aandui dat die Sandbakspeltegniek ’n positiewe verskil maak aan storievertelvaardighede, sal u kind ook op ’n latere stadium die geleentheid kry om deel te neem aan Sandbakspel.

Die Sandbakspeltegniek is ’n nuwe, multi-sensoriese benadering wat gebruik word om kinders te onderrig in storievertel- en begripsvaardighede. Storievertelvermoë word gestimuleer deur die skep van stories in ’n sandbakkonteks. Die tegniek word die “Sandbakspeltegniek van Smith (2012)” genoem. Hierdie nuwe en opwindende aktiwiteit sal in skooltyd en in mev. Saaiman se terapiekantoor plaasvind. Die skoolhoof, mnr. XXX, en die klasonderwyseres, me. XXX, het hul toestemming vir en ondersteuning aan die projek verleen.

#### **MOONTLIKE RISIKO’S EN ONGEMAK**

Daar is geen identifiseerbare risiko’s verbonde aan deelname aan hierdie studie nie. Storievertel is veronderstel om net pret, leersaam en onbedreigend te wees. Indien u kind dalk met enigiets ongemaklik sou voel tydens die terapieprogram, het hy die keuse om daarvoor te



praat of homself te ontrek van die program sonder om redes te verskaf en sonder dat daar enige negatiewe gevolge sal wees.

### **MOONTLIKE VOORDELE VIR DEELNEMERS EN/OF VIR DIE SAMELEWING**

Daar is 'n moontlikheid dat die Sandbakspeltegniek vir leergestremde leerders, soos u kind, sal help om storievertelvaardighede aan te leer. Storievertelvaardighede is noodsaaklik vir alledaagse kommunikasiesukses asook vir lees- en skryfbemagtiging en -ontwikkeling.

Die resultate van hierdie studie het ook die potensiaal om baanbrekend te wees vir ons skoolterapie- en onderwysbenaderings asook vir die professie van spraak-taaltherapie in terme van die kweek van storievertelvaardighede in leerders met leergestremdhede.

### **VERGOEDING VIR DEELNAME**

Daar sal geen geldelike vergoeding wees vir enige deelnemers aan hierdie studie nie. Vergoeding sal wees in die vorm van ekstra taal- en storievertelstimulasie wat vir u kind aangebied sal word tydens skoolure, ou die benadering suksesvol blyk te wees. Deelname aan die studie sal u ook niks ekstra kos nie.

### **VERTROULIKHEID**

Enige inligting wat deur middel van die navorsing verkry word en wat met u kind in verband gebring kan word, sal vertroulik bly en slegs met u toestemming bekend gemaak word of soos deur die wet vereis. Daar sal 'n klankopname gemaak word van alle stories wat u kind vertel tydens die sessies (sodat die stories later deur mev. Saaiman getranskribeer kan word). Die opnames en transkripsies sal vir vyf jaar na die studie in 'n geslote kas veilig gehou word. Net dr. Southwood, mnr.XXX en mev. Saaiman sal magtiging hê om die data te bestudeer. Ná vyf jaar sal die klankopnames vernietig word. 'n Skuilnaam sal verseker dat u kind se identiteit heeltemal anoniem gehou word. Mev. Saaiman beplan om haar navorsing in vakwetenskaplike tydskrifte te publiseer en by konferensies voor te dra, maar die data sal op so 'n manier aangebied word dat u kind nie herkenbaar sal wees nie.

### **DEELNAME EN ONTTREKKING**

U kind mag self besluit of hy aan die kontrole studie wil deelneem of nie. Indien hy inwillig om deel van die kontrolegroep te vorm kan hy te eniger tyd daaraan onttrek sonder enige nadelige gevolge. Hy kan ook weier om bepaalde vrae te antwoord, maar steeds aan die studie deelneem. Mev. Saaiman mag u kind van die studie onttrek indien omstandighede dit noodsaaklik maak, byvoorbeeld sou u kind se gedrag of gemoedstoestand die studie of die deelname van ander deelnemers negatief beïnvloed of sou dit blyk dat u kind nie deelname aan die aktiwiteite geniet nie.

### **IDENTIFIKASIE VAN ONDERSOEKERS**

Indien u enige vrae of besorgdheid omtrent die navorsing het, staan dit u vry om in verbinding te tree met mev. Louise Saaiman (XXX; XXX; XXX Skool, Spraak- en Taalterapie departement, 91 XXXsingel, XXX, 9XXX) of dr. Frenette Southwood (studieleier: XXX; XXX).

### **REGTE VAN DEELNEMERS**

U kan te eniger tyd u inwilliging terugtrek en u kind se deelname beëindig, sonder enige nadelige gevolge vir u of u kind. Deur deel te neem aan die navorsing doen u geensins afstand van enige wetlike regte, eise of regsmiddel nie. Indien u vrae het oor u regte as

proefpersoon by navorsing, skakel asb. met me. Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] van die Afdeling Navorsingsontwikkeling.

<p align="center"><b>VERKLARING DEUR DIE DEELNEMER SE REGSVERTREENWOORDIGER (OUE/VOOG)</b></p>
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Die bostaande inligting is aan my, \_\_\_\_\_  
(ouer/voog se naam en van), gegee en verduidelik deur mev. Louise Saaiman, in Afrikaans en ek is dié taal magtig. Ek is die geleentheid gebied om vrae te stel en my vrae is tot my bevrediging beantwoord.

Ek \_\_\_\_\_ (ouer/voog se naam en van) willig hiermee vrywillig in dat my kind \_\_\_\_\_ (kind se naam en van) aan die kontrole studie sal deel neem. Ek gee hiermee my toestemming dat hy aan die kontrole studie mag deelneem. 'n Afskrif van hierdie vorm is aan my gegee.

\_\_\_\_\_  
Naam en van van kontrole studie deelnemer (*leerder*)

\_\_\_\_\_  
Handtekening

\_\_\_\_\_  
Naam en van van regsverteenvoordiger (ouer/voog)

\_\_\_\_\_  
Handtekening

\_\_\_\_\_  
Datum

<p align="center"><b>VERKLARING DEUR ONDERSOEKER</b></p>
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Ek verklaar dat ek die inligting in hierdie dokument vervat verduidelik het aan \_\_\_\_\_ (naam van die leerder) en sy regsverteenvoordige \_\_\_\_\_ (naam van die regsverteenvoordiger (ouer/voog)). Hy/sy is aangemoedig en genoeg tyd gegee om vrae aan my te stel. Dié gesprek is in Afrikaans gevoer en geen vertaler is benodig nie.

\_\_\_\_\_  
Handtekening van ondersoeker (Mev. L. Saaiman)

\_\_\_\_\_  
Datum